RELEVANT. ACCURATE.

BLACK BOOK 2019

UNBIASED SOURCE

Black Book™ 2019 Survey

Survey Period: Q3 2018 – Q2 2019

Top Clinical Data Integration Engines

Providers, Hospitals and Physicians
Accountable Care Organizations
Health Information Exchanges
Laboratory, Pharmacy & Ancillaries

Comparative Performance of Top Platform Vendors

CLINICAL DATA INTEGRATION SOLUTIONS

Black Book Market Research LLC annually evaluates leading healthcare/medical software and service providers across 18 operational excellence key performance indicators completely from the perspective of the client experience. Independent and unbiased from vendors' influence, over 646,000 healthcare IT users are invited to contribute. Suppliers also encourage their clients to participate to produce current and objective customer service data for buyers, analysts, investors, consultants, competitive suppliers and the media. For more information or to order customized research results, please contact the Client Resource Center at +1 800.863.7590 or Info@BlackBookMarketResearch.com

For more information, visit www.BlackBookMarketResearch.com

SURVEY OVERVIEW

In Q3 2018 through Q2 2019, the Black Book's client/user/prospective customer survey investigated 44 healthcare data integration and connectivity vendors utilized by 1,545 validated system users for rankings and an additional 1,317 respondents in pre-use, implementation, system decision making or purchased but not yet installed status. Over 2,000 prospective data integration stakeholders participated in potential use polls but not ballots that evaluate vendor performance.

Additionally, in an adjunct survey, Black Book received completed ballots from 562 healthcare payers, insurers, and related organizations on key performance indicators and trend development questions relating to payer involvement in data integration and health information exchange sustainability.

2019 Overall Top-Rated Vendor: Infor (9.56/10.00) Clinical Data Interoperability Solutions

WHO PARTICIPATES IN THE BLACK BOOK RANKING PROCESS

More than 600,000 practice management and physicians, hospital executives, board members, departmental management, financial and business staff, clinicians, IT specialists, consultants and front-line implementation veterans are invited to participate in the 2019 annual Black Book satisfaction surveys. Non-invitation participants must complete a verifiable profile and utilize a valid corporate email address to be included though mobile apps, online web surveys, panels and call center follow up methods.

Black Book utilizes two external software and services verification solutions to ensure the highest quality and authenticity of its respondents. More information is available on the survey instruments on our website.

BLACK BOOK METHODOLOGY
How the data sets are collected

Black Book collects ballot results on key performance areas of operational excellence to rank vendors by data integration, interoperability and connectivity, and/or health information exchange product lines. The gathered data are subjected immediately to an internal and external audit to verify completeness and accuracy and to make sure the respondent is valid while ensuring that the anonymity of the client company is maintained. During the audit, each data set is reviewed by a Black Book executive and at least one external auditor. In this way, Black Book's clients are able to clearly see how a vendor is truly performing. The criteria on operational excellence are subdivided by the client type and further analyzed by base, market size, geography and interoperability functions reportedly used.

Situational and market studies are conducted on areas of high interest such as e-Prescribing, Health Information Exchange, Accountable Care Organization, hospital software, services providers, educational providers in e-health, bench markers and advisors. These specific survey areas range from four to 20 questions of criteria each.

UNDERSTANDING THE STATISTICAL CONFIDENCE OF BLACK BOOK SURVEY DATA

Statistical confidence for each performance rating is based upon the number of organizations scoring data integration tools. Black Book identifies data confidence by one of several means:

Broader categories may require a minimum of 20 client ballots to qualify and validated respondents. Data that is asterisked represent a sample size below required limits and are intended to be used for tracking purposes only, not ranking purposes. Performance data for an asterisked vendor's services can vary widely until a larger sample size is achieved. The margin of error can be very large, and the reader is responsible for considering the possible current and future variation (margin of error) in the Black Book performance score reported.

Vendors with over ten unique client votes are eligible for top five rankings and are assured to have highest confidence and lowest variation. Confidence increases as more organizations report on their outsourcing vendor. Data reported in this form is shown with a 95% confidence level (within a margin of 0.25, 0.20 or 0.15, respectively).

Raw numbers include the quantity of completed surveys and the number of unique organizations contributing the data for the survey pool of interest. Six subsets of stakeholders were used to isolate scores by organization type as identified by the survey participant.

.

2018 RESULTS

CLINICAL DATA INTEROPERABILITY SOLUTIONS

CLINICAL DATA INTEROPERABILITY SOLUTIONS

FUNCTIONAL SUBSET HONORS:

TOP VENDOR: PROVIDERS

INFOR

TOP VENDOR: ACCOUNTABLE CARE ORGANIZATIONS

INFOR

TOP VENDOR: HEALTH INFORMATION EXCHANGES

HEALTH CATALYST MEDICITY

TOP VENDOR: LABS, PHARMACIES & ANCILLARIES

INFOR

-FIGURE 1A/B: COMPREHENSIVE END-TO-END VENDORS ARE DEFINED AS BEING COMPRISED OF FOUR SURVEYED FUNCTIONS			
PROVIDERS	ACOS	HIES	ANCILLARIES

Source: Black Book Research

FIGURE 2: KEY TO RAW SCORES			
0.00 – 5.79 ►	◄ 5.80 – 7.32 ►	◄ 7.33 – 8.70 ►	◄ 8.71 – 10.00
Deal breaking dissatisfaction **Does not meet expectations** CANNOT RECOMMEND VENDOR	**Neutral** **Meets/does not meet expectations consistently** WOULD NOT LIKELY RECOMMEND VENDOR	**Satisfactory performance** **Meets expectations** RECOMMENDS VENDOR	**Overwhelming satisfaction** **Exceeds expectations** HIGHLY RECOMMENDED VENDOR

Source: Black Book Research

FIGURE 3: COLOR-CODED STOP LIGHT DASHBOARD SCORING KEY	
Green **8.71 +**	(Top 10%) scores better than 90% of Clinical Data Interoperability vendors. Green coded vendors have received constantly highest client satisfaction scores.
Clear **7.33 to 8.70**	(Top 33%) scores better than 67% of vendors. Well-scored vendor which have middle of the pack results.
Yellow **5.80 to 7.32**	Scores better than half of vendors. Cautionary performance scores, areas of improvement required.
Red **Less than 5.79**	Scores worse than 66% of vendors. Poor performances reported potential cause for contract cancellations.

Source: Black Book Research

FIGURE 4: RAW SCORE COMPILATION AND SCALE OF REFERENCE
Black Book raw score scales 1 = Deal breaking dissatisfaction ◄   ►   10 = Exceeds all expectations

Source: Black Book Research

Individual vendors can be examined by specific indicators on each of the main functions of vendors as well as grouped and summarized subsets. Details of each subset are contained so that each vendor may be analyzed by function and end-to-end interoperability solutions collectively.

FIGURE 5: SCORING KEY							
OVERALL RANK	Q6 CRITERIA RANK	VENDOR	PROVIDERS	ACOS	HIES	ANCILLARIES	MEAN
5	1	OPERABILITY INC	8.49	8.63	8.50	8.01	8.66

Source: Black Book Research

- **Overall rank** – this rank references the final position of all 18 criteria averaged by the mean score collectively. This vendor ranked fifth of the 20 competitors.
- **Criteria rank** – refers to the number of the question or criteria surveyed. This is the sixth question of the 18 criteria of which this vendor ranked first of the 20 vendors analyzed positioned only on this particular criteria or question. Each vendor required ten unique client ballots validated to be included in the top ten ranks.
- **Company** – name of the vendor.
- **Subsections** – each subset comprises one-fourth of the total vendor mean at the end of this row and includes all buyers and users who indicate that they contract each respective subsection with the supplier, specific to their enterprise and/or organization.
- **Mean** – congruent with the criteria rank, the mean is a calculation of all three subsets of EHR functions surveyed. As a final ranking reference, it includes all market sizes, specialties, delivery sites and geographies.

CLINICAL DATA INTEROPERABILITY SOLUTIONS

Summary of criteria outcomes

Total number one criteria ranks	Vendor	Overall rank
TABLE 1: SUMMARY OF CRITERIA OUTCOMES		
12	INFOR	1
3	INNOVACCER	3
2	HEALTH CATALYST MEDICITY	2
1	INFORMATICA	5

Source: Black Book Research

CLINICAL DATA INTEROPERABILITY SOLUTIONS

Top score per individual criteria

TABLE 2: TOP SCORE PER INDIVIDUAL CRITERIA			
Questions	Criteria	Vendor	Overall
1	Strategic Alignment of Client Goals MU VBC MACRA	INFOR	1
2	Innovation & Optimization	INNOVACCER	3
3	Training	INFOR	1
4	Client relationships and cultural fit	INFOR	1
5	Trust, Accountability, Transparency, Ethics	INFOR	1
6	Breadth of offerings, client types, delivery excellence	HEALTH CATALYST MEDICITY	2
7	Deployment and outsourcing implementation	INFOR	1
8	Customization	INNOVACCER	3
9	Integration and interfaces	INFOR	1
10	Scalability, client adaptability, flexible pricing	INFORMATICA	5
11	Compensation and employee performance	HEALTH CATALYST MEDICITY	2
12	Reliability	INFOR	1
13	Brand image and marketing communications	INFOR	1
14	Marginal value adds and modules	INFOR	1
15	Financial & Managerial Viability	INNOVACCER	3
16	Data security and backup services	INFOR	1
17	Support and customer care	INFOR	1
18	Best of breed technology and process improvement	INFOR	1

INDIVIDUAL VENDOR KEY PERFORMANCE

CLINICAL DATA INTEROPERABILITY SOLUTIONS

Ranked Vendors – raw/aggregate user satisfaction scores 2019

Rank	Vendor	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Mean
1	INFOR	9.95	9.47	9.90	9.76	9.65	9.09	9.78	9.35	9.48	8.99	9.21	9.51	9.59	9.73	9.47	9.70	9.71	9.50	9.55
2	HEALTH CATALYST MEDICITY	9.89	9.87	9.60	8.99	9.60	9.45	9.13	9.38	8.77	8.91	9.58	8.65	9.53	8.55	9.41	8.58	9.41	8.68	9.22
3	INNOVACCER	9.30	9.92	9.21	9.21	8.85	8.75	8.70	9.59	8.50	8.78	8.62	8.54	8.34	8.84	9.64	9.34	9.38	8.52	9.00
4	INTERSYSTEMS	9.00	9.45	8.77	8.85	9.10	9.42	8.21	8.01	8.98	9.10	8.46	7.46	9.43	7.63	8.07	8.83	8.17	8.55	8.64
5	INFORMATICA	9.01	9.06	9.35	8.96	9.11	8.31	8.37	8.72	8.56	9.25	8.72	8.66	7.67	8.08	7.58	8.46	8.59	8.72	8.62
6	COREPOINT	9.11	8.00	9.15	9.45	8.40	8.48	9.30	7.87	8.34	7.32	7.36	8.43	8.54	7.46	8.09	8.95	9.24	8.15	8.42
7	MULESOFT	9.67	9.35	8.83	7.07	8.77	8.62	8.54	7.91	8.86	7.01	8.91	8.16	7.81	8.65	8.83	7.90	8.47	8.22	8.42
8	CLINICAL ARCHITECTURE	7.80	8.93	8.50	8.43	8.05	9.13	9.42	8.16	7.60	7.97	8.93	8.27	9.09	8.56	7.46	7.98	8.51	8.13	8.38
9	SANSORO HEALTH	8.37	7.06	8.42	8.51	8.85	7.92	7.53	8.78	7.00	9.19	7.80	7.77	8.48	7.82	8.31	8.57	8.61	9.10	8.23
10	OPTUM	8.92	8.48	6.97	9.03	8.37	7.44	8.48	7.45	7.50	7.45	8.98	8.65	8.11	5.80	8.87	8.71	9.06	8.48	8.18
11	CHANGE HEALTHCARE	9.33	7.90	8.68	8.48	8.85	7.91	7.30	7.09	7.82	7.92	8.58	7.49	6.70	8.04	7.42	8.81	7.72	8.16	8.01
12	TIBCO SCRIBE	8.85	7.23	8.88	8.19	6.97	6.87	8.03	8.09	7.54	6.94	6.84	9.18	8.09	8.11	7.61	7.13	7.28	7.81	7.76
13	ATTUNITY	8.26	7.00	8.11	7.21	8.24	7.97	6.95	8.24	8.38	7.46	6.68	7.18	8.53	9.23	6.46	7.99	7.25	7.46	7.70
14	INFORMATION BUILDERS	8.11	9.07	7.56	7.30	7.81	7.58	8.88	7.25	6.72	8.08	6.61	7.33	6.90	8.71	7.01	7.39	6.68	8.92	7.66
15	IBM	7.06	6.28	8.35	7.22	7.28	7.88	7.81	8.62	6.00	6.83	5.74	6.66	6.55	8.27	6.35	8.59	6.41	6.99	7.16
16	SURESCRIPTS	6.02	8.39	9.32	6.98	7.36	7.95	6.55	7.81	9.10	7.09	5.93	7.24	6.86	5.64	7.17	5.92	7.29	6.07	7.15
17	MEDICOMP SYSTEMS	7.08	6.58	6.44	7.32	6.20	8.76	6.23	6.03	7.59	7.97	7.50	8.28	5.18	6.78	6.32	8.59	8.42	7.05	7.13
18	SCIO EXL	6.33	6.97	5.91	5.45	7.92	8.15	5.35	6.84	6.67	5.70	8.39	6.59	6.99	9.11	7.26	6.10	7.09	6.43	6.85
19	ORACLE	5.44	6.65	4.83	7.05	5.76	6.21	7.20	6.26	6.89	7.45	7.19	5.49	5.65	6.93	6.35	5.53	6.38	7.22	6.36
20	ORION	5.72	6.19	5.14	7.26	6.85	7.16	6.56	6.75	8.22	5.57	7.22	6.50	4.40	4.91	5.78	6.13	7.18	6.83	6.35

CLINICAL DATA INTEROPERABILITY KEY PERFORMANCE INDICATORS

CLINICAL INTEGRATION PLATFORMS & ENGINES

1. Strategic Alignment of Vendor Offerings to Physician Practice Goals & Client's Mission (MACRA, MU, ONC, HIE, Population Health, RCM)

Table 5: Organizational structure meets the needs of stakeholders or customers and stakeholder satisfaction is the most important priority. client is likely to recommend the vendor to similar sized clients and industry peers. The detailed client's interoperability and clinical data integration goals are central to the implementation process.

OVERALL RANK	Q1 CRITERIA RANK	CLINICAL DATA INTEROPERABILITY VENDOR	PROVIDERS	ACOS	HIES	ANCILLARIES	MEAN
1	1	INFOR	9.90	10.00	9.98	9.90	**9.95**
2	2	HEALTH CATALYST MEDICITY	9.88	9.60	10.00	9.98	**9.89**
7	3	MULESOFT	9.93	9.71	9.58	9.44	**9.67**
11	4	CHANGE HEALTHCARE	9.16	9.53	9.37	9.24	**9.33**
3	5	INNOVACCER	9.07	9.59	9.25	9.28	**9.30**
6	6	COREPOINT	9.35	8.57	9.09	9.42	**9.11**
5	7	INFORMATICA	9.34	9.00	8.73	8.95	**9.01**
4	8	INTERSYSTEMS	8.78	9.66	9.01	8.54	**9.00**
10	9	OPTUM	9.07	8.87	9.38	8.34	**8.92**
12	10	TIBCO SCRIBE	8.36	8.67	9.30	9.08	**8.85**

Source: Black Book™ 2019

CLINICAL DATA INTEROPERABILITY KEY PERFORMANCE INDICATORS

CLINICAL INTEGRATION PLATFORMS & ENGINES

2.   Innovation and Optimization

Table 6: Customers are also continuing to push the envelope for further enhancements to which the EHR vendor is responsive. Interoperability clients also believe that their vendors' technology is helping them manage practices more effectively, generate accurate records and reimbursement billings and cut their overhead in ways that were difficult or impossible to accomplish before clinical data integrations were implemented. Vendor is responsive to make client recommendations with cutting edge improvements.

Overall Rank	Q2 Criteria Rank	Clinical Data Interoperability Vendor	Providers	ACOS	HIES	Ancillaries	Mean
3	1	INNOVACCER	9.98	9.84	9.90	9.92	9.92
2	2	HEALTH CATALYST MEDICITY	9.56	9.93	10.00	9.99	9.87
1	3	INFOR	9.34	9.40	9.55	9.59	9.47
4	4	INTERSYSTEMS	9.67	9.57	9.31	9.24	9.45
7	5	MULESOFT	9.08	9.43	9.85	9.04	9.35
14	6	INFORMATION BUILDERS	9.13	9.00	8.86	9.28	9.07
5	7	INFORMATICA	9.33	9.27	8.82	8.81	9.06
8	8	CLINICAL ARCHITECTURE	8.75	9.11	9.34	8.50	8.93
10	9	OPTUM	8.48	7.91	9.12	8.08	8.40
16	10	SURESCRIPTS	9.02	8.12	7.79	8.63	8.39

Source: Black Book™ 2019

CLINICAL DATA INTEROPERABILITY KEY PERFORMANCE INDICATORS

CLINICAL INTEGRATION PLATFORMS & ENGINES

3. Training

Table 7: Clinical data interoperability solutions vendor leadership provides significant and meaningful training opportunities for internal employees and client staff. Leadership strives to develop technology staff, client service and customer servicing consultant employees. Training modules are effective and practical so that minimal post-implementation training is required on or off site. Regular updates are timely and require minimal additional training to implement.

Overall Rank	Q3 Criteria Rank	Clinical Data Interoperability Vendor	PROVIDERS	ACOS	HIES	ANCILLARIES	Mean
1	1	INFOR	9.97	9.83	9.99	9.81	**9.90**
2	2	HEALTH CATALYST MEDICITY	9.52	9.94	9.55	9.40	**9.60**
5	3	INFORMATICA	9.64	9.09	9.05	9.60	**9.35**
7	4	MULESOFT	9.39	9.70	9.07	9.13	**9.32**
3	5	INNOVACCER	9.40	9.25	9.00	9.18	**9.21**
6	6	COREPOINT	8.42	9.54	9.14	9.51	**9.15**
12	7	TIBCO SCRIBE	8.17	8.55	9.51	9.29	**8.88**
19	8	ORACLE	9.24	8.97	8.62	8.50	**8.83**
4	9	INTERSYSTEMS	8.98	9.18	8.36	8.57	**8.77**
11	10	CHANGE HEALTHCARE	8.42	8.72	8.63	8.94	**8.68**

Source: Black Book™ 2019

CLINICAL DATA INTEROPERABILITY KEY PERFORMANCE INDICATORS

CLINICAL INTEGRATION PLATFORMS & ENGINES

4.   Client relationships and cultural fit

Table 8: Solutions vendor leadership honors customer relationships highly. The relationship with the vendor elevates the customer reputation. Improving outcomes healthcare delivery efficiency and effectiveness is a priority of the supplier. Governance of engagement is neither complex for buyer nor does it require vendor management attention regularly. There is no regular transparency or quality issue. There are no culture clashes or misfits that threaten relationship's success or client's satisfaction.

Overall Rank	Q4 Criteria rank	Clinical Data Interoperability Vendor	Providers	ACOS	HIES	Ancillaries	Mean
1	1	INFOR	9.66	9.77	9.73	9.88	**9.76**
6	2	COREPOINT	9.15	9.46	9.42	9.77	**9.45**
3	3	INNOVACCER	9.33	9.30	9.15	9.08	**9.23**
10	4	OPTUM	9.04	9.16	8.99	8.93	**9.03**
2	5	HEALTH CATALYST MEDICITY	9.08	9.04	8.97	8.88	**8.99**
5	6	INFORMATICA	8.86	9.39	8.82	8.77	**8.96**
4	7	INTERSYSTEMS	9.09	9.04	8.53	8.73	**8.85**
9	8	SANSORO HEALTH	8.83	7.48	9.35	8.40	**8.53**
11	9	CHANGE HEALTHCARE	8.30	8.98	8.21	8.45	**8.50**
8	10	CLINICAL ARCHITECTURE	8.82	8.48	8.03	8.38	**8.43**

Source: Black Book™ 2019

CLINICAL DATA INTEROPERABILITY KEY PERFORMANCE INDICATORS

CLINICAL INTEGRATION PLATFORMS & ENGINES

5. Trust, Accountability, Ethics and Transparency

Table 9: Trust in enterprise reputation is important to clients as well as prospects. Client possesses an understanding that its vendor organization has the people, processes, and resources to effectively deliver the desired business and clinical results, based on its industry reputation and past performance. There are no disconnects between promises and delivery.

OVERALL RANK	Q5 CRITERIA RANK	CLINICAL DATA INTEROPERABILITY VENDOR	PROVIDERS	ACOS	HIES	ANCILLARIES	MEAN
1	1	INFOR	9.65	9.86	9.74	9.34	**9.65**
9	2	HEALTH CATALYST MEDICITY	9.65	9.41	9.65	9.69	**9.60**
5	3	INFORMATICA	9.32	9.42	8.69	9.01	**9.11**
4	4	INTERSYSTEMS	9.04	9.24	9.57	8.54	**9.10**
3	5	INNOVACCER	8.93	8.94	8.60	8.91	**8.85**
11	6	CHANGE HEALTHCARE	8.51	8.85	8.53	9.52	**8.85**
7	7	MULESOFT	9.30	8.94	8.03	8.81	**8.77**
6	8	COREPOINT	8.69	8.33	7.85	8.74	**8.40**
10	9	OPTUM	8.80	8.54	8.23	7.90	**8.37**
13	10	ATTUNITY	8.56	8.58	8.09	7.73	**8.24**

Source: Black Book™ 2019

CLINICAL DATA INTEROPERABILITY KEY PERFORMANCE INDICATORS

CLINICAL INTEGRATION PLATFORMS & ENGINES

6. Breadth of offerings, varied client settings, delivery excellence across all user types

Table 10: Interoperability solutions vendor offers industry recognized horizontal functionality and vertical industry applications and manage bundled services such as integration and connectivity as well as developing new e-Health initiatives. Vendor routinely drives operational performance improvements and results in the areas they affect. Comprehensive offerings are constructed to meet the unique needs of the client's interoperability initiatives. Breadth of vendor modules offers comprehensive system services and broad modules.

OVERALL RANK	Q6 CRITERIA RANK	CLINICAL DATA INTEROPERABILITY VENDOR	PROVIDERS	ACOS	HIES	ANCILLARIES	MEAN
2	1	HEALTH CATALYST MEDICITY	9.42	9.54	9.42	9.40	**9.45**
4	2	INTERSYSTEMS	9.43	9.34	9.43	9.47	**9.42**
8	3	CLINICAL ARCHITECTURE	9.30	9.18	9.05	8.99	**9.13**
1	4	INFOR	9.27	9.22	9.26	8.62	**9.09**
17	5	MEDICOMP SYSTEMS	8.91	9.06	8.58	8.49	**8.76**
3	6	INNOVACCER	8.49	8.47	8.53	9.50	**8.75**
7	7	MULESOFT	9.08	8.72	8.01	8.67	**8.62**
6	8	COREPOINT	8.84	8.31	7.96	8.82	**8.48**
5	9	INFORMATICA	8.46	8.52	8.21	8.06	**8.31**
18	10	SCIO EXL	8.25	8.56	8.07	7.71	**8.15**

Source: Black Book™ 2019

CLINICAL DATA INTEROPERABILITY KEY PERFORMANCE INDICATORS

CLINICAL INTEGRATION PLATFORMS & ENGINES

7. Deployment and EHR implementation

Table 11: Clinical data integration client deploys at a pace acceptable to the client. Interoperability solutions eliminate excessive supervision over vendor implementations. Vendor overcomes client implementation obstacles and challenges effectively. Technical, organizational and cultural implementation obstacles are handled professionally and punctually. Solutions implementation time meets standard expectations. Implementations are efficient and sensitive to users' specific situations which may cause delays.

Overall Rank	Q7 Criteria Rank	Clinical Data Interoperability Vendor	PROVIDERS	ACOS	HIES	ANCILLARIES	Mean
1	1	INFOR	9.82	9.56	9.96	9.76	**9.78**
8	2	CLINICAL ARCHITECTURE	9.47	9.03	9.42	9.74	**9.42**
6	3	COREPOINT	9.04	9.39	9.36	9.41	**9.30**
2	4	HEALTH CATALYST MEDICITY	9.04	9.49	8.46	9.52	**9.13**
14	5	INFORMATION BUILDERS	8.91	9.05	8.56	9.00	**8.88**
3	6	INNOVACCER	8.64	8.95	8.10	9.09	**8.70**
7	7	MULESOFT	8.60	8.79	8.06	8.69	**8.54**
10	8	OPTUM	8.23	8.94	8.00	8.76	**8.48**
5	9	INFORMATICA	7.88	8.49	8.50	8.61	**8.37**
4	10	INTERSYSTEMS	9.00	7.61	7.88	8.34	**8.21**

Source: Black Book™ 2019

CLINICAL DATA INTEROPERABILITY KEY PERFORMANCE INDICATORS

CLINICAL INTEGRATION PLATFORMS & ENGINES

8. Customization

Table 12: Interoperability products and process services are customized to meet the unique needs of specific practice client purpose, processes and physician models. Little resistance is encountered when changing performance measurements as clients' needs vary. Extraordinary efforts are made to adapt and convert client special needs into workable solutions with efficient cost and time considerations. Solutions allow for modifications that are not costly or complex.

Overall Rank	Q8 Criteria Rank	Clinical Data Interoperability Vendor	Providers	ACOS	HIES	Ancillaries	Mean
3	1	INNOVACCER	9.45	9.47	9.64	9.78	9.59
2	2	HEALTH CATALYST MEDICITY	9.53	9.56	9.08	9.36	9.38
1	3	INFOR	9.42	9.43	9.11	9.42	9.35
9	4	SANSORO HEALTH	8.59	8.50	8.62	9.39	8.78
5	5	INFORMATICA	8.98	8.45	8.36	9.07	8.72
15	6	IBM	8.13	8.84	8.34	9.15	8.62
13	7	ATTUNITY	8.55	8.00	7.37	9.03	8.24
8	8	CLINICAL ARCHITECTURE	7.34	8.61	8.09	8.60	8.16
12	9	TIBCO SCRIBE	7.77	7.99	8.58	8.00	8.09
4	10	INTERSYSTEMS	7.00	7.81	8.00	9.22	8.01

Source: Black Book™ 2019

CLINICAL DATA INTEROPERABILITY KEY PERFORMANCE INDICATORS

CLINICAL INTEGRATION PLATFORMS & ENGINES

9. Integration and interfaces

Table 13: Solutions vendor supports interfaces so information can be shared between necessary applications. Solutions are easily integrated to existing backend systems as needed and HIE feasible. Seamless interfaces to legacy applications are performed as required for optimal functioning. Human integration and interface activities are administered precisely. Systems communicate effectively among provider groups and ancillaries. True interoperability with other healthcare organizations and third parties is factored into implementation.

Overall Rank	Q9 Criteria rank	Clinical Data Interoperability Vendor	PROVIDERS	ACOS	HIES	ANCILLARIES	Mean
1	1	INFOR	9.47	9.64	9.33	9.47	9.48
16	2	SURESCRIPTS	8.67	9.33	9.10	9.29	9.10
4	3	INTERSYSTEMS	8.75	9.18	8.79	9.19	8.98
7	4	MULESOFT	8.61	8.58	8.84	9.42	8.86
2	5	HEALTH CATALYST MEDICITY	9.35	8.21	9.06	8.45	8.77
9	6	SANSORO HEALTH	8.88	8.49	8.21	9.14	8.68
5	7	INFORMATICA	9.03	8.69	8.14	8.38	8.56
3	8	INNOVACCER	8.60	8.28	8.77	8.36	8.50
13	9	ATTUNITY	8.93	7.49	8.50	8.59	8.38
6	10	COREPOINT	7.85	8.73	8.17	8.11	8.34

Source: Black Book™ 2019

CLINICAL DATA INTEROPERABILITY KEY PERFORMANCE INDICATORS

CLINICAL INTEGRATION PLATFORMS & ENGINES

10. Scalability, client adaptability, flexible pricing

Table 14: Data integration/connectivity solutions vendor provides flexible pricing allowing the client to choose and pay for the precise functionality and services needed. Vendor Invests in significant infrastructure and has the ability to provide services to enterprise organizations. IT products and services meet the changing and varied needs of the organization customer. Pricing is not rigid or shifting and meets needs of client.

Overall Rank	Q10 Criteria Rank	Clinical Data Interoperability Vendor	Providers	ACOS	HIES	Ancillaries	Mean
5	1	INFORMATICA	9.38	9.23	9.27	9.10	**9.25**
9	2	SANSORO HEALTH	9.12	9.38	9.08	9.17	**9.19**
4	3	INTERSYSTEMS	9.03	9.21	8.99	9.16	**9.10**
1	4	INFOR	8.42	9.27	9.37	8.89	**8.99**
2	5	HEALTH CATALYST MEDICITY	8.44	9.02	8.99	9.20	**8.91**
3	6	INNOVACCER	8.67	8.95	8.83	8.66	**8.78**
14	7	INFORMATION BUILDERS	7.69	7.83	7.93	8.85	**8.08**
8	8	CLINICAL ARCHITECTURE	8.19	8.30	6.97	8.43	**7.97**
17	9	MEDICOMP SYSTEMS	8.45	7.61	8.41	7.40	**7.97**
11	10	CHANGE HEALTHCARE	7.47	7.99	8.40	7.81	**7.92**

Source: Black Book™ 2019

CLINICAL DATA INTEROPERABILITY KEY PERFORMANCE INDICATORS

CLINICAL INTEGRATION PLATFORMS & ENGINES

11. Vendor staff expertise, compensation and employee performance

Table 15: Interoperability solutions vendor team of employees is considered top in industry for professionalism and skill. Vendor attracts and retains high performing staff. Vendor is focused on building and developing a strong employee team of producers. Employees act like owners/leaders. Company is moving towards leveraged pay at all levels. Vendor is using effective tools to tie performance metrics to compensation policy and compensating top leaders. Human resources-related criteria are scored from the client perspective on this indicator.

OVERALL RANK	Q11 CRITERIA RANK	CLINICAL DATA INTEROPERABILITY VENDOR	PROVIDERS	ACOS	HIES	ANCILLARIES	MEAN
2	1	HEALTH CATALYST MEDICITY	9.32	9.67	9.63	9.70	**9.58**
1	2	INFOR	9.23	9.14	9.22	9.26	**9.21**
10	3	OPTUM	9.13	9.12	9.02	8.65	**8.98**
8	4	CLINICAL ARCHITECTURE	8.64	9.26	8.66	9.14	**8.93**
7	5	MULESOFT	8.73	8.85	8.83	9.22	**8.91**
5	6	INFORMATICA	8.75	8.65	8.64	8.83	**8.72**
3	7	INNOVACCER	8.61	8.48	8.94	8.45	**8.62**
11	8	CHANGE HEALTHCARE	8.19	8.36	9.02	8.74	**8.58**
4	9	INTERSYSTEMS	8.71	7.92	8.60	8.61	**8.46**
18	10	SCIO EXL	8.07	7.90	8.82	8.76	**8.39**

Source: Black Book™ 2019

EHR & PM VEN DOR KEY PERFORMANCE INDICATORS

CLINICAL INTEGRATION PLATFORMS & ENGINES

12. Reliability

Table 16: Interoperability solutions supplier meets agreed terms as evidenced by routine, acceptable service level reporting and industry expectations. Depth and breadth of applications/solutions are acceptable in meeting client needs. Online reliability meets expectations, and outages/downtimes are minimized. Solid product and service capacities are demonstrated consistently. Service levels are consistently met as agreed. Services and support response is expedient and provided with appropriate resources by vendor team.

Overall Rank	Q12 Criteria rank	Clinical Data Interoperability Vendor	PROVIDERS	ACOS	HIES	ANCILLARIES	Mean
1	1	INFOR	9.58	9.47	9.42	9.58	**9.51**
12	2	TIBCO SCRIBE	9.06	9.27	8.91	9.47	**9.18**
5	3	INFORMATICA	8.12	8.77	8.83	8.90	**8.66**
2	4	HEALTH CATALYST MEDICITY	8.39	8.60	8.40	9.20	**8.65**
10	5	OPTUM	9.08	8.82	8.42	8.27	**8.65**
3	6	INNOVACCER	8.66	8.57	7.99	8.92	**8.54**
6	7	COREPOINT	8.71	8.72	8.13	8.16	**8.43**
17	8	MEDICOMP SYSTEMS	8.38	8.06	8.55	8.14	**8.28**
8	9	CLINICAL ARCHITECTURE	8.52	8.32	8.28	7.98	**8.28**
7	10	MULESOFT	7.63	8.18	7.95	8.89	**8.16**

Source: Black Book™ 2019

CLINICAL DATA INTEROPERABILITY KEY PERFORMANCE INDICATORS

CLINICAL INTEGRATION PLATFORMS & ENGINES

13. Brand image and marketing communications

Table 17: Interoperability vendor's marketing and sales statements/pitches are accurately and appropriately represented by actual data integration product and service deliverables. Image is consistent with top vendor rankings. Sales presentations and proposals are delivered upon and corporate integrity/honesty in marketing and business development are highly valued. Company image and integrity are values upheld top-down consistently. Elevated level of relevant client communications enhances the vendor – client/user relationship.

OVERALL RANK	Q13 CRITERIA RANK	CLINICAL DATA INTEROPERABILITY VENDOR	PROVIDERS	ACOS	HIES	ANCILLARIES	MEAN
1	1	INFOR	9.55	9.49	9.67	9.79	9.59
4	2	INTERSYSTEMS	8.93	9.82	9.79	9.41	9.53
2	3	HEALTH CATALYST MEDICITY	9.48	9.78	9.23	8.41	9.23
8	4	CLINICAL ARCHITECTURE	9.37	8.76	9.22	9.00	9.09
6	5	COREPOINT	8.51	8.67	8.65	8.34	8.54
13	6	ATTUNITY	8.21	8.91	8.68	8.31	8.53
9	7	SANSORO HEALTH	9.00	8.87	8.14	7.89	8.48
3	8	INNOVACCER	8.34	8.72	7.77	8.52	8.34
10	9	OPTUM	7.49	8.04	8.75	8.14	8.11
12	10	TIBCO SCRIBE	8.30	8.34	7.61	8.10	8.09

Source: Black Book™ 2019

CLINICAL DATA INTEROPERABILITY KEY PERFORMANCE INDICATORS

CLINICAL INTEGRATION PLATFORMS & ENGINES

14. Marginal value adds

Table 18: Beyond basic organizational interoperability goals, the vendors' cost savings are realized as generally estimated and not over-positioned or over/underestimated in ways that effect major client satisfaction or costs. Vendor offers value-adds as a managerial partner in cost savings and avoidance initiatives and creative programs through bundled product design. Provides true business transformation opportunities to all client types.

Overall Rank	Q14 Criteria Rank	Clinical Data Interoperability Vendor	PROVIDERS	ACOS	HIES	ANCILLARIES	Mean
1	1	INFOR	9.79	9.82	9.50	9.81	**9.73**
13	2	ATTUNITY	9.30	9.19	9.07	9.35	**9.23**
18	3	SCIO EXL	9.43	9.11	8.79	9.12	**9.11**
3	4	INNOVACCER	8.76	9.07	8.61	8.90	**8.84**
14	5	INFORMATION BUILDERS	9.10	8.84	8.40	8.51	**8.71**
7	6	MULESOFT	8.50	9.21	8.35	8.55	**8.65**
8	7	CLINICAL ARCHITECTURE	8.19	8.71	9.28	8.07	**8.56**
2	8	HEALTH CATALYST MEDICITY	7.58	8.72	8.63	9.26	**8.55**
15	9	IBM	8.23	8.25	8.18	8.39	**8.28**
12	10	TIBCO SCRIBE	7.84	8.41	7.65	8.53	**8.11**

Source: Black Book™ 2019

CLINICAL DATA INTEROPERABILITY KEY PERFORMANCE INDICATORS

CLINICAL INTEGRATION PLATFORMS & ENGINES

15. Viability and managerial stability

Table 19: Vendor's viability, employee turnover, financial stability and/or cultural mismatches do not threaten relationship. Senior management and the board exemplify strong leadership principals to steward appropriate resources that impact buyers. Client is confident of long term industry viability for this vendor based on investments, client adoption, exceptional outcomes and service levels. Field management is notably competent, stable and supportive of clients. Integration vendor demonstrates and provides evidence of competent fiscal management and leadership.

OVERALL RANK	Q15 CRITERIA RANK	CLINICAL DATA INTEROPERABILITY VENDOR	PROVIDERS	ACOS	HIES	ANCILLARIES	MEAN
3	1	INNOVACCER	9.64	9.77	9.62	9.51	**9.64**
1	2	INFOR	9.58	9.56	8.99	9.75	**9.47**
18	3	HEALTH CATALYST MEDICITY	9.42	9.30	9.45	9.45	**9.41**
9	4	OPTUM	9.02	8.77	8.50	9.17	**8.87**
7	5	MULESOFT	9.15	8.42	8.99	8.77	**8.83**
9	6	SANSORO HEALTH	7.99	8.47	8.66	8.12	**8.31**
6	7	COREPOINT	7.76	8.20	8.13	8.26	**8.09**
4	8	INTERSYSTEMS	8.15	8.32	7.65	8.15	**8.07**
12	9	TIBCO SCRIBE	7.16	7.01	7.29	8.96	**7.61**
11	10	CHANGE HEALTHCARE	6.86	6.92	7.40	8.48	**7.42**

Source: Black Book™ 2018

CLINICAL DATA INTEROPERABILITY KEY PERFORMANCE INDICATORS

CLINICAL INTEGRATION PLATFORMS & ENGINES

16. Data security and backup services

Table 20: In order to provide secure and constantly dependable interoperability product and service offerings for physician and hospital/IDN affiliate practices and entities, a vendor has to provide the highest level of security and data back-up services. Interoperability vendor's service in these two areas is superior to the security and back-up system of past internal systems of the client organization.

Overall Rank	Q16 Criteria Rank	Clinical Data Interoperability Vendor	Providers	Acos	Hies	Ancillaries	Mean
1	1	INFOR	9.65	9.79	9.69	9.67	**9.70**
17	2	MEDICOMP SYSTEMS	9.35	9.31	9.42	9.26	**9.34**
6	3	COREPOINT	8.71	8.77	9.32	9.00	**8.95**
4	4	INTERSYSTEMS	8.84	8.51	8.98	8.98	**8.83**
11	5	CHANGE HEALTHCARE	9.09	8.30	9.10	8.75	**8.81**
10	6	OPTUM	8.82	8.73	8.83	8.46	**8.71**
3	7	INNOVACCER	8.57	8.66	8.29	8.85	**8.59**
15	8	IBM	7.78	8.85	8.83	8.89	**8.59**
2	9	HEALTH CATALYST MEDICITY	8.12	8.69	8.70	8.82	**8.58**
9	10	SANSORO HEALTH	8.15	8.99	8.90	8.24	**8.57**

Source: Black Book™ 2019

CLINICAL DATA INTEROPERABILITY KEY PERFORMANCE INDICATORS

CLINICAL INTEGRATION PLATFORMS & ENGINES

17. Support and customer care

Table 21: Account management provides an adequate amount of onsite administration and support to clients. There exists a formal account management program that meets client needs. Media and clients reference this vendor as a services leader and top vendor correctly. Customer services and relationship satisfaction is manifested through significant flagship clients as well as smaller and newest customers similarly. Vendor provides appropriate number of accessible support and customer care personnel.

OVERALL RANK	Q17 CRITERIA RANK	CLINICAL DATA INTEROPERABILITY VENDOR	PROVIDERS	ACOS	HIES	ANCILLARIES	MEAN
1	1	INFOR	9.68	9.60	9.77	9.77	**9.71**
2	2	HEALTH CATALYST MEDICITY	9.41	9.34	9.48	9.40	**9.41**
3	3	INNOVACCER	9.53	9.11	9.32	9.56	**9.38**
6	4	COREPOINT	8.86	9.42	9.17	9.50	**9.24**
10	5	OPTUM	9.35	9.13	8.64	9.12	**9.06**
9	6	SANSORO HEALTH	8.34	8.35	8.92	8.82	**8.61**
5	7	INFORMATICA	8.21	9.05	8.83	8.28	**8.59**
2	8	HEALTH CATALYST MEDICITY	8.58	8.57	8.14	8.81	**8.53**
8	9	CLINICAL ARCHITECTURE	7.85	8.38	9.10	8.70	**8.51**
7	10	MULESOFT	8.63	7.68	8.87	8.71	**8.47**

Source: Black Book™ 2019

CLINICAL DATA INTEROPERABILITY KEY PERFORMANCE INDICATORS

CLINICAL INTEGRATION PLATFORMS & ENGINES

18. Best of breed technology and process improvement developments

Table 22: Interoperability management and related technology services are considered best of breed. Vendor technology elevates customers via capabilities, equipment, processes, deliverables, professional staff, leadership, quality assurance and innovative initiatives. Interoperability services are delivered at or above current/former in-house service levels. Technology is current and relevant to exchanging health information among providers, as well as sufficiently offering patient access.

OVERALL RANK	Q18 CRITERIA RANK	CLINICAL DATA INTEROPERABILITY VENDOR	PROVIDERS	ACOS	HIES	ANCILLARIES	MEAN
1	1	INFOR	9.68	9.60	9.77	9.77	9.71
15	2	IBM	9.41	9.34	9.48	9.40	9.41
19	3	ORACLE	9.53	9.11	9.32	9.56	9.38
6	4	COREPOINT	8.86	9.42	9.17	9.50	9.24
10	5	OPTUM	9.35	9.13	8.64	9.12	9.06
9	6	SANSORO HEALTH	8.34	8.35	8.92	8.82	8.61
5	7	INFORMATICA	8.21	9.05	8.83	8.28	8.59
2	8	HEALTH CATALYST MEDICITY	8.58	8.57	8.14	8.81	8.53
8	9	CLINICAL ARCHITECTURE	7.85	8.38	9.10	8.70	8.51
7	10	MULESOFT	8.63	7.68	8.87	8.71	8.47

Source: Black Book™ 2019

Appendix

Black Book market research surveys & IT user polling

We hope that the data and analysis in this report will help you make informed and imaginative EMR/EHR business decisions. If you have further requirements, the Black Book research team may be able to help you. For more information about Black Book's custom survey capabilities, please contact us directly at info@brown-wilson.com

Disclaimer

All Rights Reserved.

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form by any means (electronic, mechanical, photocopying, recording or otherwise), without the prior permission of the publisher, Black Book Rankings. The facts of this report are believed to be correct at the time of publication but cannot be guaranteed. Please note that the findings, conclusions and recommendations that Black Book Rankings delivers will be based on information gathered in good faith from both primary and secondary sources, whose accuracy we are not always able to guarantee. As such, Black Book Research can accept no liability whatever for actions taken based on any Information that may subsequently prove to be incorrect.

Follow Black Book on Twitter at www.twitter.com/blackbookpolls

For methodology, auditing, resources, comprehensive research and ranking data, see http://blackbookmarketresearch.com.