



Drug Diversion Monitoring 2023

New Advanced Capabilities Beginning to Show Promise



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Executive Insights

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New Advanced Capabilities Beginning to Show Promise

[Drug diversion monitoring](#) is a key area that helps healthcare organizations improve patient safety and prevent drug waste and misuse. The second generation of drug diversion monitoring solutions utilizes predictive models, artificial intelligence (AI), and machine learning (ML), and users are beginning to see outcomes such as correctly identified risks, reduced false positives, and increased efficiency. This report examines which vendors are driving outcomes, how advanced AI/ML capabilities are impacting the user experience, and how well vendors partner with and support customers.

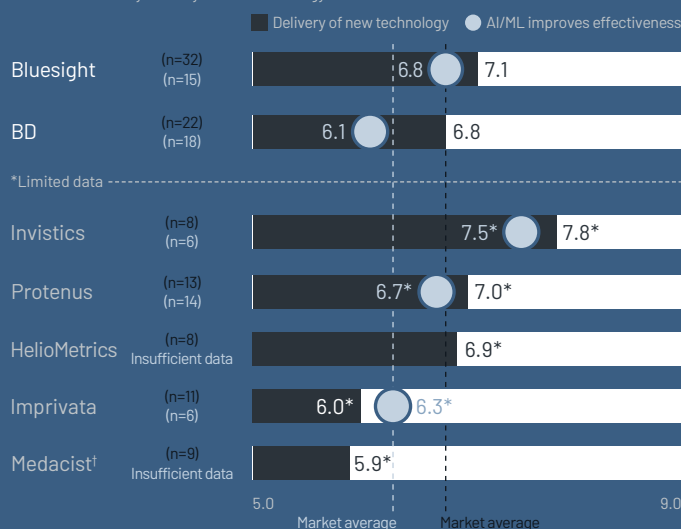
Bluesight & Protenu Customers Want Continued Development for Advanced Capabilities; Invictics' Smaller Customer Base Seeing Success with AI

Customers' interest in AI/ML is increasing due to the potential to improve the accuracy of risk predictions and non-compliance detection, and respondents express some optimism about these capabilities. Most interviewed **Bluesight** customers view the vendor as a leader in drug diversion monitoring, citing an easy-to-use solution and promising AI capabilities. Customers want Bluesight to continue to develop advanced capabilities and improve the integration and ability to digest data. Early reported outcomes associated with AI include identifying potential diversions, finding education opportunities, and supporting higher efficiency and better drug-use visibility. Initial feedback from some **Protenu** customers (limited data) indicates the AI models are learning and adapting to their policies and preferences; these customers report benefits like decreased false positives and more accurately identified drug waste and diversions. Other respondents have yet to see outcomes. Overall, customers say Protenu is still developing and refining their algorithms. **Invictics** (acquired by Wolters Kluwer in June 2023) has the smallest customer base of measured vendors, and limited data on Invictics shows customers are satisfied with AI capabilities, highlighting good risk-scoring reports and help identifying potential diversions. One respondent mentioned the AI learns from their facility and other facilities using the product and that users can customize alerts to their hospital's needs.

Delivery of New Technology & AI/ML Effectiveness

(1-9 scale)

Vendors ordered by delivery of new technology score

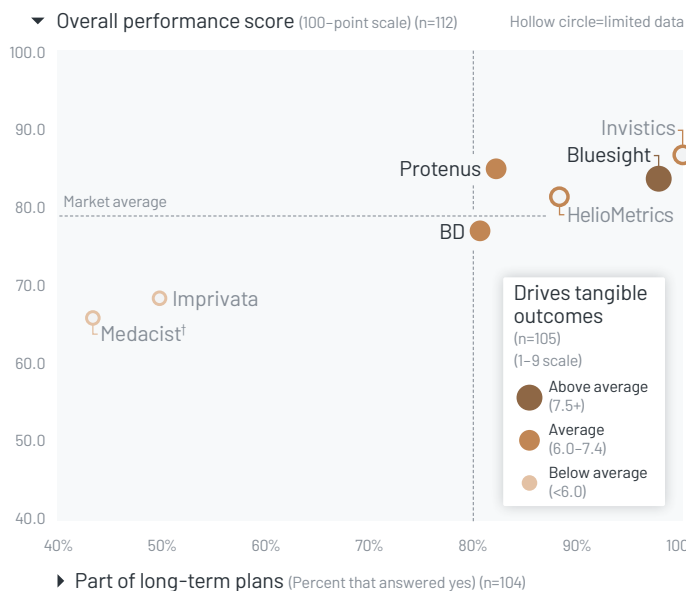


† Data for Medacis includes two solutions: RxAuditor Investigate and RxAuditor. KLAS has validated a handful of customers live with the vendor's go-forward solution, RxAuditor Investigate.

Invictics & HelioMetrics Performing Well Despite Limited Market Adoption; Imprivata Customers Report Continued Struggles Post-Acquisition

While Invictics and HelioMetrics have smaller customer bases, their customers are generally satisfied. **Invictics** customers (limited data) report the solution finds diversions and drives outcomes, and all respondents say it is part of their long-term plans; they are also optimistic about the future and feel the vendor listens to them. Clients want the system to be more user friendly and the reports to be more timely. **HelioMetrics** customers (limited data) say the product works as advertised, and 89% consider it part of their long-term plans. Respondents report the product effectively integrates outside data; a few note the amount of data can be overwhelming. Some customers want more AI/ML functionality to reduce false positives and guide users through the complex data, while others don't feel AI/ML is necessary to achieve outcomes. As reported in KLAS' [2022 report](#) on drug diversion monitoring, satisfaction with the FairWarning solution dropped significantly after its acquisition by **Imprivata**. Since then, customer ratings have remained stagnant. Clients report some improvement to product functionality and support, but they note the vendor isn't keeping up with advanced analytics capabilities or delivering promised features. About half of Imprivata respondents are looking to replace the solution.

Overall Performance Score, Part of Long-Term Plans & Drives Tangible Outcomes



† Data for Medacis includes two solutions: RxAuditor Investigate and RxAuditor. KLAS has validated a handful of customers live with the vendor's go-forward solution, RxAuditor Investigate.

Despite Advancing Integration, BD Customers Continue to Experience Functionality Challenges

BD has a large footprint in the pharmacy and medication management market, and their drug diversion monitoring solution is often selected for this reason. Customers who are most satisfied with the product appreciate the integration across BD's suite and continued development via frequent updates; they also see the reconciliation functionality as a strength that drives outcomes (e.g., identifying potential diversions and opportunities to improve poor practice). Less-satisfied respondents are often smaller acute care customers. Overall, most respondents note the solution is newer and still has development gaps (e.g., usability, AI/analytics). Many customers also note integration challenges with pumps and purchasing data; KLAS has validated customers with BD's new integration in procedural areas. Customers of **Bluesight** and **Protenus** report integration is advancing, though adoption of integration with purchasing and procedural data is inconsistent among both customer bases. Respondents from **HelioMetrics**[†] (limited data) smaller customer base note the vendor's extensive guidance helps them make the most of their data.

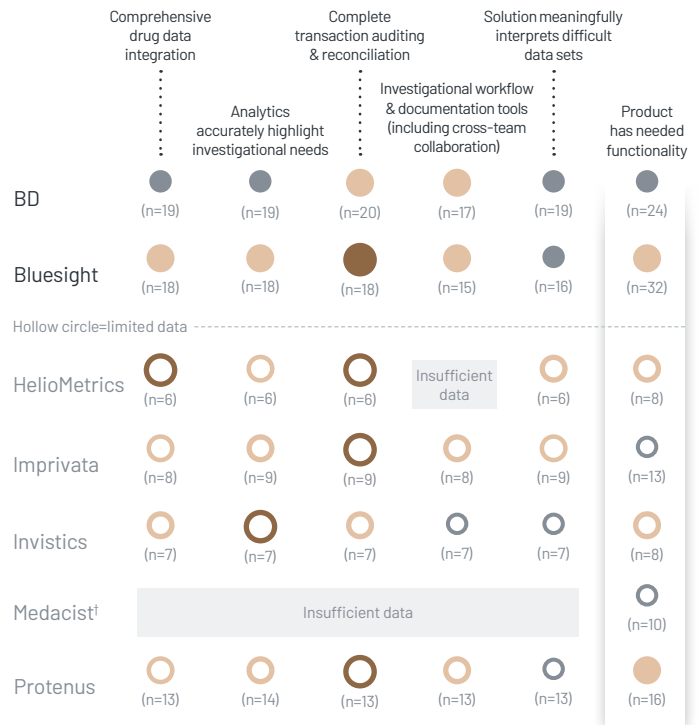
Across all measured vendors, customers report integration gaps—the largest being with purchasing, procedural, and infusions/PCA data. Most, if not all, data sources can be integrated with drug diversion monitoring systems; the difficulty lies with the availability of resources who can build the integration and workflows and the availability of expertise on how to use data sets in investigations and other diversion activities. Provider organizations making purchase decisions should evaluate (1) whether a drug diversion monitoring vendor can integrate with desired data sources, (2) whether the vendor has done the integrations before, (3) what technological and operational best practices the vendor recommends, and (4) how organizations want to use the data to improve their drug diversion program's effectiveness.

Performance of Drug Diversion Monitoring Functionalities

Vendors ordered alphabetically

Performance rating (1-9 scale)

● Good (7.5+) ● Neutral (6.5-7.4) ● Poor (≤6.4)



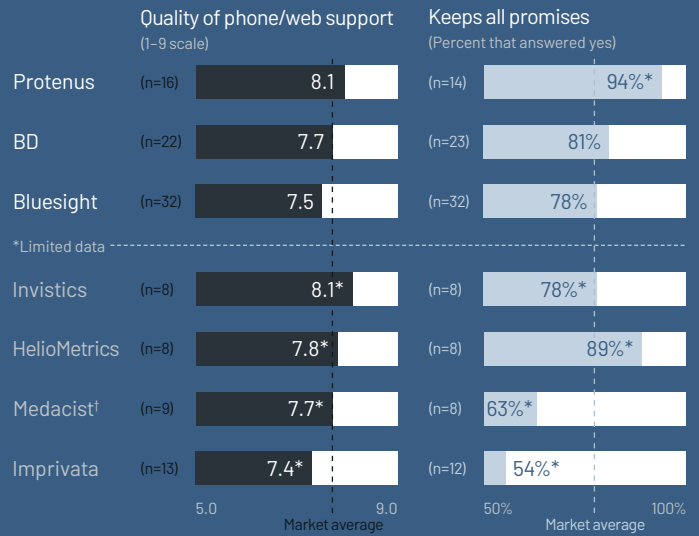
† Data for Medacis includes two solutions: RxAuditor Investigate and RxAuditor. KLAS has validated a handful of customers live with the vendor's go-forward solution, RxAuditor Investigate.

Protenus Leads in Supporting Customers and Keeping Promises; Bluesight Customers Feel Support Is Declining as Vendor Grows

Protenus is highlighted for the support they provide to customers, who describe the vendor as accommodating, proactive, and quick to respond and resolve problems. Respondents also say the high-quality support drives a sense of partnership with Protenus. **Bluesight** customers, who previously reported high satisfaction with support, note a recent decline; they attribute this change to the vendor struggling to scale support as they have grown, leading to increased response and resolution times and undelivered promises. Customers of **Invistics** (limited data) appreciate the vendor's strong, proactive support. Respondents note they have easy access to executive leadership, leading them to feel the vendor keeps their promises. Those who don't feel **Invistics** keeps all promises say the vendor overpromised on the solution's capabilities. **Medacis** (acquired by Bluesight in July 2023) customers have seen improvement in support; still, only 44% of respondents say Medacis is part of their long-term plans due to most customers being live with the vendor's legacy solution, RxAuditor. **BD** customers report improvements in empowered support, citing the vendor's Insight Consultants; respondents note they want to see more proactive outreach from the vendor.

Quality of Phone/Web Support and Keeps All Promises

Vendors ordered by quality of phone/web support score



† Data for Medacis includes two solutions: RxAuditor Investigate and RxAuditor. KLAS has validated a handful of customers live with the vendor's go-forward solution, RxAuditor Investigate.

Drug Diversion Services

According to customer feedback, there is an emerging trend of customers partnering with services firms for expertise and help establishing and running drug diversion programs. Rxpert Solutions, Trexin, and Visante are examples of such firms, and KLAS will continue to monitor healthcare organizations' interest in these services.

Report Information

Share your experience with peers.
Take a short survey about your drug diversion monitoring technology.



About This Report

Each year, KLAS interviews thousands of healthcare professionals about the IT solutions and services their organizations use. For this report, interviews were conducted over the last 12 months using KLAS' **standard quantitative evaluation** for healthcare software, which is composed of 16 numeric ratings questions and 4 yes/no questions, all weighted equally. Combined, the ratings for these questions make up the overall performance score, which is measured on a 100-point scale. The questions are organized into six customer experience pillars—culture, loyalty, operations, product, relationship, and value.

Customer Experience Pillars

Category	Culture	Loyalty	Operations	Product	Relationship	Value
Standard software evaluation metrics	<ul style="list-style-type: none"> Proactive service Keeps all promises Product works as promoted 	<ul style="list-style-type: none"> Would you buy again Part of long-term plans Forecasted satisfaction Overall satisfaction Likely to recommend 	<ul style="list-style-type: none"> Quality of training Quality of implementation Ease of use 	<ul style="list-style-type: none"> Overall product quality Product has needed functionality Supports integration goals Delivery of new technology 	<ul style="list-style-type: none"> Quality of phone/web support Executive involvement 	<ul style="list-style-type: none"> Money's worth Avoids charging for every little thing Drives tangible outcomes

To supplement the customer satisfaction data gathered with the standard evaluation, KLAS created a **supplemental evaluation** to understand customer satisfaction with their vendor's advanced AI/ML capabilities. KLAS asked interviewed participants to rate their solution's (1) comprehensive drug data integration, (2) ability to interpret difficult data sets, (3) analytics that accurately highlight investigational needs, (4) AI/ML algorithms that improve drug diversion effectiveness, (5) investigational workflow/documentation tools, and (6) complete transaction auditing and reconciliation. Data was collected from June 2022 to June 2023.

Sample Sizes

Unless otherwise noted, sample sizes displayed throughout this report (e.g., n=16) represent the total number of *unique customer organizations* interviewed for a given vendor or solution. However, it should be noted that to allow for the representation of differing perspectives within any one customer organization, samples may include surveys from different individuals at the same organization. The table below shows the total number of unique organizations interviewed for each vendor or solution as well as the total number of individual respondents.

Some respondents choose not to answer particular questions, meaning the sample size for any given vendor or solution can change from question to question. When the number of *unique organization* responses for a particular question is less than 15, the score for that question is marked with an asterisk (*) or otherwise designated as "limited data." If the sample size is less than 6, no score is shown. Note that when a vendor has a low number of reporting sites, the possibility exists for KLAS scores to change significantly as new surveys are collected.

	Standard Evaluations		Supplemental Evaluations		Estimated Customer Base for Measured Solution (at time of research)
	# of unique organizations	# of individual respondents	# of unique organizations	# of individual respondents	
BD	24	34	19	20	30-49
Bluesight	32	45	18	18	50-99
HelioMetrics	8	9	6	6	10-29
Imprivata	13	14	9	9	30-49
Invistics	8	9	7	7	10-29
Medacis†	10	10	4	4	100+
Protensus	16	18	14	15	30-49

† Data for Medacis includes two solutions: RxAuditor Investigate and RxAuditor. KLAS has validated a handful of customers live with the vendor's go-forward solution, RxAuditor Investigate.

Reader Responsibility

KLAS data and reports are a compilation of research gathered from websites, healthcare industry reports, interviews with healthcare, payer, and employer organization executives and managers, and interviews with vendor and consultant organizations. Data gathered from these sources includes strong opinions (which should not be interpreted as actual facts) reflecting the emotion of exceptional success and, at times, failure. The information is intended solely as a catalyst for a more meaningful and effective investigation on your organization's part and is not intended, nor should it be used, to replace your organization's due diligence.

KLAS data and reports represent the combined candid opinions of actual people from healthcare, payer, and employer organizations regarding how their vendors, products, and/or services perform against their organization's objectives and expectations. The findings presented are not meant to be conclusive data for an entire client base. Significant variables—including a respondent's role within their organization as well as the organization's type (rural, teaching, specialty, etc.), size, objectives, depth/breadth of software use, software version, and system infrastructure/network—impact opinions and preclude an exact apples-to-apples comparison or a finely tuned statistical analysis.

KLAS makes significant effort to identify all organizations within a vendor's customer base so that KLAS scores are based on a representative random sample. However, since not all vendors share complete customer lists and some customers decline to participate, KLAS cannot claim a random representative sample for each solution. Therefore, while KLAS scores should be interpreted as KLAS' best effort to quantify the customer experience for each solution measured, they may contain both quantifiable and unidentifiable variation.

We encourage our clients, friends, and partners using KLAS research data to take into account these variables as they include KLAS data with their own due diligence. For frequently asked questions about KLAS methodology, please refer to klasresearch.com/faq.

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Note

Performance scores may change significantly when additional organizations are interviewed, especially when the existing sample size is limited, as in an emerging market with a small number of live clients.



LEAD AUTHOR
Jennifer Hickenlooper

jennifer.hickenlooper@KLASresearch.com



CO-AUTHOR
Lance Merrell

lance.merrell@KLASresearch.com

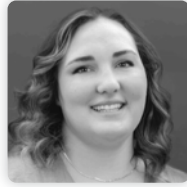


CO-AUTHOR
Jackson Tate

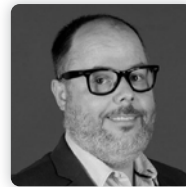
jackson.tate@KLASresearch.com



WRITER
Natalie Hopkins



DESIGNER
Jessica Bonnett



PROJECT MANAGER
Andrew Wright



Our Mission

Improving the world's healthcare through collaboration, insights, and transparency.

365 S. Garden Grove Lane, Suite 300
Pleasant Grove, UT 84062

Ph: (800) 920-4109

For more information about KLAS, please visit our website:
www.KLASresearch.com

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Customer Interview Details

Questions Asked in Supplemental Evaluation

Rate your vendor's comprehensive drug data integration (purchasing through to administration/waste/return/procedural areas).

Rate your vendor's ability to meaningfully interpret difficult data sets (procedural areas, infusion/PCA pumps, etc.).

Rate your vendor's analytics that accurately highlight investigational needs.

Rate your vendor's AI/ML algorithms that improve drug diversion effectiveness.

Rate your vendor's investigational workflows and documentation tools (including cross-team collaboration tools).

Rate your vendor's complete transaction auditing and reconciliation.

Additional comments

Rate your vendor's comprehensive drug data integration (purchasing through to administration/waste/return/procedural areas).

BD

We currently do not have the procedural area interface. There is an additional fee for that. However, we should have it soon. We are not on the versions of Pyxis Logistics, Pyxis CII Safe, and Pyxis MedStation ES that offer integrated purchasing and receiving of controlled substances.

The data is based on dispenses from the system and on administration, waste, or return actions from the EHR. Purchase data and administrations that are documented without something being dispensed are not included. Administrations documented in anesthesia records are not part of the administration feed and are therefore not reconciled.

The product doesn't handle drips well, so we still have to manually reconcile our drips, and there are some areas, like the procedural surgical areas, where we still have to do a lot of manual reviewing.

I don't think that we have the purchasing piece of the system. We will have that piece once we put it into the system, but we aren't fully interoperable yet. That isn't the system's fault. We just have to get everything on board.

The product does not include the procedural areas yet. We are told the vendor is working on those areas, but I don't have a timeline yet.

We don't have procedural data. We have BD's Pyxis anesthesia devices, and there is currently nothing that BD HealthSight Diversion Management can do to reconcile data from our EMR for one-step medications.

The product is very thorough in getting all the needed information.

We have found that the data doesn't look at everything correctly sometimes. We dig into the data, and we find that it is not always 100% accurate.

The product does not pull in purchasing data.

Overall, the vendor is doing well with individual cases.

We have some issues with how the vendor rates things, and they are not providing an overarching dashboard that we can look at to drill in and see what things look like from a 30,000-foot level. The vendor also doesn't have procedural areas. They are starting to get into those, and things have been delayed longer than we initially anticipated.

We are able to integrate over 96% of the data into this application for interpretation.

Right now, there is no integration with the purchasing side.

The system pulls information from our EHR and our medication dispensing system into a single platform, but there is no purchasing information. Some configuration is required by the user to make the information meaningful, but overall, I am happy with the information that is available.

The system doesn't do anything in the pharmacy, and we are not covering procedural areas.

We are getting data integration into BD's diversion monitoring software, but that takes a lot of work. A lot of the ownership to make that happen is on us versus BD coming in and helping us do that. The other thing that has been challenging is the fact that the technology industry has had a lot of turnover in recent times. It has been a little more difficult to execute some of the validity of the data we have had, so we have been spending a lot of time on data validation.

Bluesight

I was going to give the system the top score because the comprehensive drug data integration is really good, but there are issues. There is always room for improvement. The comprehensive drug data integration gets a little muddled when something happens, like when the OR and the PACU are both administering the same drug, and those instances get mixed together and brought up in one transaction. For whatever reason, the system cuts off at 9:00 p.m., so I am always missing about three hours' worth of data from the day before, and then I get the data the next day because the system is holding onto it.

ControlCheck doesn't have accurate cost data.

The Bluesight system is lacking a purchasing component. There is also a gap with discrepancies that occur during inventory that the system doesn't capture.

Sometimes the data for the surgical areas doesn't connect. For example, I get multiple open variances that don't connect from our pharmacy drug dispenser. So those are left as open variances to audit. That is easy to recognize, but there isn't the capability to match those yet.

There is a significant difference between having difficult data and comprehensive data. In medical-surgical nursing, we can compare things. The issue is that in outpatient surgery, everything depends on the specific nurse. Perhaps one nurse pulls all of the drugs, and they might look like they are a high user, but that is just a function of their job. Our experience has been that ControlCheck handles things well.

We are very happy with the breadth of data the tool can handle.

While the product can integrate things in several different areas, it is limited to using SFTP data files and not HL7 interfaces. That delays the data for at least 24 if there are no issues.

Currently, we do not have the pharmacy module, which includes the purchasing data. Our procedural areas still document on paper, so admin data is not available in the product.

We do not have full integration with our wholesaler's system and our automated dispensing cabinet storage solution in the pharmacy. That disconnect is why we do not utilize the purchasing-through-delivery-to-nursing-unit piece. Otherwise, the integration works for us from the nursing unit to the administration side.

We are able to reconcile dispenses, wastes, and returns. However, while the software plays really well with the major wholesalers, with some of the smaller compounding vendors, those feeds are not integrated. We are still reconciling things manually.

We have this big safe in our central pharmacy where we keep our drugs, and every nurse's station has a little drug cabinet. The data that ControlCheck is getting is everything that comes out of those little drug cabinets from the nursing stations, but it is not getting data from our huge safe in our pharmacy. We have to download that information manually. Also, there is a feature in ControlCheck that tells us that if we order something from our vendor, we actually have to put it into that big safe. Bluesight has only linked with one of our vendors, but with other vendors, we have to manually enter all of the things we have ordered from them.

We have some problems with some of ControlCheck's mapping, and we have spent quite a bit of time working on things. There are some medications that we have to filter out because they don't seem to balance how we want them to, and that creates a problem for the providers looking at results. It hurts people's confidence in the application if we dig in later and find out that an administration matches everything, even if ControlCheck said there was no match. We have worked with Bluesight and narrowed the group of drugs down.

The mapping and drug data descriptions can be difficult to comprehend. One drug can be displayed in multiple ways, and we are ultimately responsible for mapping things together and making them applicable. If that process could be easier for the end user, that would be nice.

When we are trying to dig in to a data issue, I sometimes get a hands-off approach from the vendor until I come up with some better, more specific questions. I have to go to the vendor with more of the problem-solving pieces versus the vendor trying to talk us through a thought process.

We find a lot of things in the system that we can see in our EMR but that don't come across to ControlCheck. We are using ControlCheck's query in our EMR, so we would think that everything we are looking for should be in there. But there are times when I can pull up the order history of a discrepancy and plainly see where the administration happened or where the waste happened. And that means that the waste that happened in our EMR or in our medication cabinet came across the HL7 to our EMR. All the information is clearly seen in the order history but somehow was missed in ControlCheck.

HelioMetrics

The product's information is comprehensive but can be very tedious to access. We didn't use the product for months after purchasing it because it was so difficult to use.

We have a module to track medications between the automated dispensing cabinets and patients. I can track drugs at any point. The module works well in the procedural area.

We have integrated our EMR and automated dispensing cabinets, and we are working on moving our HR and timekeeping data in as well.

As far as I am aware, HelioMetrics does not do any integration on the purchasing side. The system does of course look at administrations, wastes, returns, and transactions of that nature, but as far as integration beyond such features, it is lacking.

We are in the process of implementing the pharmacy module, which will include a purchasing piece and other pharmacy information. For nursing and anesthesia, the product is very comprehensive.

Imprivata

There are some gaps between the waste and administration pieces. I think that there are a lot of questions about those pieces, and that very may well just be on our IT side in terms of something not transcribing through. But we have had some issues with some misinformation within the application.

The system functions fine, but when there is an upgrade on either side, there are usually delays and issues.

FairWarning Drug Diversion Intelligence does not monitor purchases. It also doesn't have the ability to monitor administrations, wastes, or returns. Medication reconciliation is not yet live in the system.

There is no purchasing in the system. We have waste return administration, but a lot of procedural areas are on paper. We miss out on the administration data, but that isn't really Imprivata's problem. We don't even have purchasing integrated, so I am assuming that is not a capability.

We are in the process of expanding where we are looking. The procedural areas are very challenging.

Procedural areas are difficult. For example, our catheterization lab staff does not document things, so I always get investigations on their transactions, but no medications are missing.

We do not have purchasing information integrated into the tool. We only have information from the removal of medication from the cabinet to the administration of that medication to the patient.

The only pieces that we are still doing manually are the purchasing, receipt, and inventory, so Imprivata's system basically picks things up as soon as we receive the drugs into our inventory. But Imprivata's system doesn't do the ordering and doesn't cover the purchasing piece. But the procedural areas and everything else are done through Imprivata's system.

Invistics

The integration is going well, with the exceptions of drips and PCAs.

The comprehensive integration of drug data does a good job until we reverse the distribution. The reverse distribution overview is cumbersome, and until the solutions have better relationships with the distributors, things will continue to be that way.

The product does everything, but we don't have the full integration yet with our PCA.

Invistics isn't integrating the product, but that is not the vendor's fault. I know the vendor can do the integrations; they just aren't doing them for me. I am still trying to get the right people engaged and give those people the data from the EMR and the timekeeping solution.

Flowlytics pulls in data from ordering areas to administration areas, and that includes time-clock information. However, the way it pulls in time-clock information has issues. That process doesn't work the way we intended it to. We aren't able to pull in specific data on what was administered as a continuous controlled substance infusion versus what was wasted in our automated dispensing cabinets. We have to do manual chart reviews.

Protenus

There are still some holes that are missing, but overall, things are light-years better than where we were.

The product is doing a great job of tracking the entire process from start to finish. The data is easy to understand, and the process is efficient.

The system isn't currently integrating with distributors for purchasing data, but they do well working within the limitations of EMR data.

There is some integration with the drug data, but there are sometimes errors in the program, such as things not being reconciled even though it is the same product and everything should be reconciled. The integration is not perfect.

Currently, our purchasing data isn't in Protenus Diversion Analytics. We still have a gap in our oversight over what is purchased and received. Ideally, I would love to have more oversight over purchasing, especially in the pharmacy department.

Delivering comprehensive drug data is one of Protenus' strengths. They provide seamless integration with a lot of different platforms to spit out useful information from a single site. We are very surprised. Typically, we are hesitant because we want to validate information, and in every example, we have been able to go through our other systems and find exactly what we see in Protenus. We are very confident in the Protenus solution's ability to pull data from multiple systems and consolidate it into usable information.

I don't know that anyone does comprehensive drug data integration well in all stretches, and I know a lot of the inner workings of what Protenus is doing to make strides in this area. I think the purchasing data is a struggle for them, but I don't know whether the deficiency is Protenus' or our partner vendor's that Protenus has to integrate with.

We have some issues in the procedural areas that could be based solely on our processes. One person removes something, and another person wastes it, and sometimes those two actions don't always link. Protenus does work with us on those issues, but the product is still flagging things.

The drug data integration is only as good as the areas that we have procedural data for, so the vendor is pretty good at that. For example, if the healthcare organization doesn't have dispensing cabinets in a certain procedural area, they can't integrate things. So the quality is really a collaborative effort.

We had some struggles with our operating rooms and anesthesia. It is a targeted space for diversion. That is an area where things could slip through, so people just need to pay attention to that. I don't think the vendor does a bad job at that. They put out what needs to happen and what their limits are. But for diversion in and of itself, some fine-tuning is needed.

The solution isn't inclusive of purchasing dates or controlled substance vault transactions. The system includes admissions, EHR, and time and attendance data for all nursing, procedural, and anesthesia areas.

Purchasing data is not included, and the anesthesia data integration isn't completely up and running. There are some flaws there.

Protenus does not currently have purchasing data included in the platform. So I can track everything from my automated dispensing cabinets, but I don't have what is coming into the pharmacy. The vendor did make an improvement so we could have the pharmacy central service included in the data stream, but the functionality was a little clunky, so we are still working through some optimizations.

Protenus doesn't incorporate purchasing, and they are not monitoring behavior in procedural areas. But I know that procedural areas are on Protenus' road map.

Rate your vendor's ability to meaningfully interpret difficult data sets (procedural areas, infusion/PCA pumps, etc.).

BD

BD HealthSight Diversion Management does not currently handle continuous infusions or PCA administration.

We have no pump integration with the product; however, our pumps are also not integrated with our EHR, so the capability may be possible if the pumps are integrated with the EHR. Continuous infusions show based on the total number of bags administered, and we cannot calculate things based on the rate that is charted. The vendor is working on a procedural reconciliation function, but that is not yet available at our site.

The system meaningfully interprets difficult data sets. We just don't have a lot of diversions.

If we have a narcotic set, the product does not correctly adjust for the dose given or the waste. That makes things hard to really interpret.

With difficult data sets, I look for consistent nuances in the data, and I don't think that BD HealthSight Diversion Management pulls nuanced transactions or highlights them meaningfully. The data that comes out is very plain.

There is so much data that it is difficult to sort through the data on a quick, limited-time basis. We have to have a dedicated person spend quite a bit of time managing the data.

The calculations for epidurals in labor and delivery are never correct.

BD is not able to do infusions or procedural areas. Those are the two gaps they need to fill.

The product is doing a great job of pulling and interpreting the data being received from all areas, including procedural areas. The interpretation of the data seems to be getting better and better with time.

We have had some difficulty with the infusion and PCA pumps.

We don't get a lot of false red flags. Our anesthesia nurses are able to analyze different areas appropriately.

Continuous infusions and patient-controlled analgesia are not well reflected in the program due to interoperability issues.

The product wholly relies on the data being perfect within the Pyxis server, or wherever the repository is. If the data is wrong or any data points are wrong within the system, it skews the results. If we are given a rating of a possible diverter, that rating could be skewed into the red unintentionally because maybe the person forgot to return something and fixed the issue later.

There is really no reconciliation of infusions right now; there is a relative gap for infusions and PCA pumps. BD was recently looking to potentially start mapping out things in the OR, so that will hopefully be up and running soon.

We have ongoing problems with false flags in certain areas. The system is not able to account for medications that are removed by one nurse but administered or wasted by another nurse.

The system doesn't cover procedural areas for us. It doesn't do infusions at all. It doesn't do PCA pumps, and the difficult data sets are still a problem.

There are always some complex workflows in the validation of data. In our system, we are seeing the procedural-area reconciliation data, but we aren't at a point where we are seeing infusion pumps.

Bluesight

The meaningful interpretation of difficult data sets is hard for the product. The product doesn't have the logic down perfectly. There is some overlap, or the product doesn't understand something. Also, when a nurse deletes documentation, there is negative documentation, and the product doesn't know how to read that. So I get false positives and have to go into the MAR and see that the nurse didn't give a certain medication and where the nurse deleted that documentation.

We don't have ControlCheck in the OR or the anesthesia areas, but that is something that I am striving for in the future.

The Bluesight system doesn't interpret anything. Since it is integrated with our EMR, the Bluesight system does not interpret anything that is not linked to the patient record.

The information is pretty readable.

We had to do a lot of scrambling to make sure the drug crosswalk was appropriate. It is much better now, but it took a lot more work to improve it than we expected.

The product does not have the ability to audit infusions.

The tool does not do well with infusions, but that could be a function of our users or our EMR vendor.

The vendor is still working on including infusions and PCAs.

The procedural areas work great. Right now, we are unable to audit infusions and PCAs.

Our pumps are not EHR integrated regarding procedural areas.

The system's ability to meaningfully interpret different data sets will improve once our anesthesia EMR is automatically feeding data into ControlCheck. The process remains manual for now.

The product's inability to capture administration reconciliation and continuous infusion is also a gap.

There is a feature in ControlCheck that talks about action time, which is how long the person is holding the drug after they take it out of the medication station. When it comes to procedural areas, the time a person holds a drug depends on how long the procedure was. It could be three to twelve hours. So we are getting false information; it looks like the user is holding the drug for a long time, but it is because the surgery was so long. If ControlCheck had surgery times and infusion data, that would clean up our data a little better.

ControlCheck is currently lacking in the infusion, PCA, and tracking areas. That probably has a lot to do with the integrated pump piece because there is missing data.

There is an overlap between two of our departments, and that makes it difficult to tell whose responsibility something is. We have to ignore infusions and PCAs in the data because there is no removal from our medication cabinet in some of those cases, so they just have open administrations, which is just white noise for nursing. We are just ignoring those for now.

HelioMetrics

PCA pumps and narcotic drips are particularly challenging. I don't know whether that is because of our EMR system, and I don't know what HelioMetrics is capable of, but I would like to tell when the drip starts or ends or how many administrations of PCA are delivered. I have to go back to my EMR to find that.

We don't have a ton of experience with the product in interpreting difficult data sets, but with the information that we do get, the product does a great job with it.

HelioMetrics' system does not interpret anything on its own. The tool does bring in a lot of complex data to be visualized, but it does not actually meaningfully interpret the data. That said, the charts and graphs and whatnot should count for something.

We don't have our PCA or infusion data in some visuals because our organization is going through standardization of the data.

Imprivata

I don't usually get very many alerts for PCA pumps and things like that, but the data sets that we do get are pretty straightforward. The vendor is always emailing and asking for specifications or things like that.

The system seems to know the items that pop up and need to be looked at.

FairWarning Drug Diversion Intelligence does not have the functionality to meaningfully interpret difficult data sets at this time.

Some of the data for the procedural areas is missing, like for the PCA pumps. The data for those is almost nonexistent because our EMR does not talk to the pumps, so we cannot extract the data. That isn't necessarily Imprivata's fault; we just have other inferior technologies involved.

We have a person who can filter through the data and help us identify what the problems are.

By nature, the reports are complicated. But Imprivata does a good job of making the reports less complicated. We do not include information about the pumps in the system yet.

Interpreting difficult data sets is still fairly new for Imprivata.

Investics

The product consistently gets better over time. The vendor is very open when we have a concern. The data is so comprehensive that I sometimes feel like I am not looking at it correctly. Still, the vendor does a reasonably good job of displaying information. The product's ability to individualize things to a certain area and see meaningful trends for that area is still not where I want it to be.

The procedural areas are very well covered. The big problem is getting the PCA pump overview to work. Part of the issue stems from how things are built in the EHR.

We are still working on optimization. The product can interpret the data, but it needs to be optimized.

Procedural areas are very complex, and I think Investics does the best they can. But I don't think that Flowlytics is built out as much as other solutions are. The system isn't where it needs to be so that I can do intense analysis. Recently, I was doing QA and found a whole bunch of problems with infusions in terms of the way the system calculated the amount of medication taken from the pumps. The functionality is there, but at this point, I don't think I have seen the benefits of the product.

The infusions are really difficult. It is really hard to link up infusions because of how they are documented. The situation is getting much better, but that capability has been difficult to set up.

We are having an issue with the data that is sent from another system to Flowlytics. Our continuous infusions and PCAs still require manual chart review.

Protenus

The one area that the product has been not pulling in the data correctly for is our PCA pumps. The system was flagging everyone who was using those pumps. We had to reel back some of the data there.

There is a workable process of identifying our needs through regular meetings with our Protenus representative. Our questions or issues are escalated quickly, and the resolution turnaround is good.

Protenus works well within the constraints of their data sets.

Most of the things that the product has done to look at the data come through pretty well for us as far as unreconciled things and other incident metrics go.

We do not have any infusions or PCAs integrated with Protenus' system, so we are getting tablet capsule patches and intermittent IV doses. I think the system has the capabilities we need. However, we have a process for managing proof-of-use documentation with volume-controlled substances, and we currently use a form that is outside of our EMR, so there is no data transfer. Protenus does a good job with complex data, but there are some aspects of complex data that we don't have in scope.

Part of the issue in meaningfully interpreting difficult data sets is not the product's fault; it is our fault in terms of how we document infusions and PCAs in our data. Those things are not actually in discreet fields, and when the data is not in discrete fields, we don't really help the product.

Protenus is working on some updates with PCAs and infusions, and once the product has those updates, they will help tremendously.

The procedural area is included. Controlled substance infusion is not included but may be on the vendor's road map. My organization currently does not have pump interoperability. I would like to see more accessible data on utilization compared to peers rather than just a standard deviation for a given medication utilization.

The data is not integrated, so we can't see whether the PCA pump was hung for certain patients or how much was infused based on the admin data. Based on when clinicians changed out the syringe, we can't see how much medication is left. We don't have pumps that are integrated with Epic's system, but we are documenting in the Epic system.

None of the systems do a great job of meaningfully interpreting difficult data sets. Improving that is on Protenus' road map, and I appreciate that because I know that they are looking at it, but infusions and pumps are currently just part of an area that doesn't reconcile well in the tool. We normally have to either exclude them or accept that they are going to add some noise. However, I think the tool is great in procedural areas.

Protenus struggles with infusions and PCAs. They struggle with infusions because there are challenges with priming lines and tracking rate changes and things. We are working with them to improve things in that area.

The infusion and PCA pumps are partially implemented, but the procedural areas are not.

Rate your vendor's analytics that accurately highlight investigational needs.

BD

There is still noise in the system since it is unable to accurately process continuous infusions or PCA administrations. There is a way to mark items that we do not want to see, such as PCA keys, but they still show up on the reconciliation tab. There is no way to completely remove them from the assessments.

The risk score algorithm was recently adjusted, so the scores are somewhat more meaningful. The analytics area is still a work in progress for BD. It is difficult to identify the peer group assigned to a user's score.

The product marks discrepancies, but I can't mark them as resolved or closed. If there are any false positives or investigations into false positives, we have to track those outside of the software.

BD's scoring system is a little skewed, so it only sometimes reflects accurate information.

BD HealthSight Diversion Management does a decent job in nonprocedural areas of reconciling transactions, and those have usually been our biggest red flags to initiate further investigation. The product needs to improve in using nuanced data to highlight risk stratification. The product doesn't highlight high users or rank users against their peers very well. There are a lot of misses. BD could intend to do some things in the background and try to package things simply. But unfortunately, when things get packaged, the system doesn't highlight any risks. BD HealthSight Diversion Management doesn't do a good job of leading us to where we should focus.

The analytics are alerting us to the correct investigational paths.

The platform makes high-risk areas easily identifiable.

The product helps by pointing us in the right direction regarding who and what we need to be looking at, and there are quite a few different markers in the product that contribute to identifying a high-risk individual.

The compliance report identifies the transactions that require investigation.

The risk-scoring algorithm has always been off. BD has historically used morphine equivalence to account for risk scoring. If somebody wastes a full dose of something like fentanyl, then that situation trumps everything. Somebody could be taking oxycodone, but that person's morphine equivalents might not add up to the same issue level as the level of someone with fentanyl issues. The algorithm has a lot of noise early on and is just not at the point where it is calculating the highest risk or identifying the things that are most likely to be diverted. The algorithm is counting things multiple times. If a patient has one specific issue, then that one issue seems to get multiplied and will count against the patient, shooting the patient to the top of the list. That doesn't really make much sense. The risk-scoring algorithm isn't helpful at all, and BD knows that we feel that way because we have told them multiple times. That has been our biggest disappointment with the system.

The system calculated a diversion risk score that was not meaningful. There are many false flags in the system that skew the results. Also, the weighting of the various indicators doesn't make sense. A delayed administration or waste seems to count as much as missing documentation.

The reconciliation is pretty good at finding individual doses that need to be investigated for tablets being missing or something like that. However, with the anomaly rankings, I get more false positives than I get findings. The reports are actually better than the anomaly rankings because I can find things on the reports like a standard deviation problem or behaviors like delayed waste admins.

I am a tough judge of every system, and I don't think I would ever give a diversion system a full score on anything. But we do get some really good summarized data that is a lot easier to get than the historical way we have run all the reports. The conciseness is nice.

Bluesight

With complicated transactions I have to manually close, the product marks that the transaction needed a second glance when it actually didn't. So then the product may bump somebody up into review status.

ControlCheck has a whole section devoted to investigations. When we open an investigation, ControlCheck keeps the information and has a checklist of things we should do if we suspect that there are diversions going on. So ControlCheck is helpful that way, and we can also customize the list if we want to.

Bluesight is still working on analytics and developing more products as we request them. We would like Bluesight to develop some canned reports that are automatically generated so that we don't have to create a report every time we need one. There are different activities within the system that we track, but we have to monitor those things manually.

I don't use that functionality a lot, but the Individual Risk Identification Score takes all the data and matches the trends. But sometimes the false negatives affect all the ratings. We might think that one nurse is in the red or is at risk, but really, their score is because of all those false-negative open variances. Bluesight for Controlled Substances couldn't match things up automatically, and that was affecting the nurses' scores. Sometimes the data is not very accurate. We still have to audit the trending data that the system is populating.

We have definitely seen benefits. The system's analytics highlight potential issues or risky behaviors and investigate those with the data from our drug-dispensing robots.

It is very difficult to assess whether the analytics are accurately highlighting our investigational needs as we have not done a comparison.

We haven't found a true diversion event yet, but we have seen trends where best practices have not been completed and where RNs have needed education.

The analytics for transaction discrepancies, waste, and action times are very useful. Recently, we identified a diversion due to action times and waste volumes.

The product identifies individuals of interest well.

We haven't caught any diverters from using ControlCheck. Vendors will say that when we turn their solution on, we will find somebody immediately, and the system will be red on top. That hasn't been the case. Even when the system is red on top, it doesn't show us much information when we deep dive into the data, and the issue doesn't turn out to be anything.

I struggle with analytics primarily due to how they change whenever we update dates, times, and comparisons among different users. I would like to see more consistency and be able to drill down to one user's actions regardless of how many shifts they have worked. I have to play with the system a lot to get accurate feedback from the analytics.

People make rather large jumps in a very short time on their IRIS scores. One person may have been 1,000, and now, they are 1. The solution looks at seven days of information. That movement doesn't make a lot of sense to me if the system is looking for anomalies in behavior; there can't be that much of a difference in behavior from one day or one week to the next. But when we do look at that individual who jumped thousands of places in a short time, we don't find anything that backs up any type of diversion behavior or access to patient charts; we don't see anything that corroborates the data. Bluesight has upsold their ability a little.

HelioMetrics

The system ranks users within a certain nurse's station against their colleagues because they should be similar. Our previous system would send me six people to audit, and HelioMetrics' system makes me spend 2 hours per unit to see whether there is anyone to investigate.

The system's AI looks at people who have high usage rates compared to their peers. That is how I pick who I am going to review each week.

The dashboard visualizations are great for very easily seeing outliers and filtering data down to department or unit comparisons. The visualizations are very telling and helpful in triggering an investigation. If we go to our nursing colleagues, we can bring them numbers and metrics. Seeing a visual representation sometimes helps people to understand when they have had more than double the activity of anyone else in the department, for example. It has been really helpful for us to use the system to that advantage.

HelioMetrics' system does a very poor job of highlighting investigational needs. Most of the work in that regard must be done by pharmacists or managers on staff at the hospitals. HelioMetrics' system aggregates and visualizes the data, but the staff must determine investigational needs.

The data in the product is very extensive, and there are so many review points. The product works great for me when my brain just takes off on an investigation and I am seeking more and more information. The product has waste reviews, barcode-scanning reviews, dispense reviews, normalized-administration reviews, missing-medication reviews, dispense-off-the-clock reviews, and more.

Imprivata

A lot of times, nothing really comes of the alerts and emails that I do get from our analyst. There is no real investigation needed. The emails and alerts are mostly about inventory discrepancies, lack of waste, lack of documentation, and things like that. Nothing has really come out of those alerts or investigations; those things are more so just going against our policies within the hospital.

The person that I am working with on the managed service team has pharmacy experience, and that is helpful. The system is set up for both of us to look at a lot more than I could have looked at in the past with a previous system, and the system is saving us time. Previously, I would spend a lot of time gathering and reviewing reports before I could identify anything. Imprivata's product is definitely a much better use of our investigational time.

The analytics are very helpful.

FairWarning Drug Diversion Intelligence does not have the functionality to use analytics to accurately highlight investigational needs at this time.

Most times, the investigations I get are accurate and need a follow-up.

The system does a pretty good job of providing analytics, although we do not do a lot to leverage the tools.

Imprivata's analytics are just excellent. As a part of our agreement with Imprivata, we have a resource that is dedicated to our facility. When they identify something in their analytics, most of the time it is something that needs to be looked at. Either the practice needs to be improved or there is a need to look at an investigation. We really don't get any false positives with Imprivata's analytics.

Invistics

I like that we can look across the system with the product, but it still takes more time than is acceptable to dig into the data.

The data is great, but the user interface can be difficult to navigate.

Invistics' product does a pretty good job of highlighting where things are risky, but the system also has a lot of false positives. We waste a lot of time investigating areas that don't need to be investigated. The vendor is actually coming out with a new version that we are getting ready to adopt. From what we are seeing, that version will definitely reduce the number of false positives and allow us to focus our time. Things really will get better. But we aren't seeing the benefits of that version yet because we don't yet have it.

The dashboard shows us the people at the highest risk, and we have caught some diverters based on that information.

Not all alerts are accurate. The alerts still need to be confirmed. Not all areas have the same risk point or parameters. However, there are other reports that can be used to attain things or filter things for individuals that require a deeper dive.

It is very helpful that we can identify high-risk users and quickly compare their shifts with their peers who are working in the same unit.

We have had some challenges with data interpretation leading to false positives.

Protenus

I have been able to have meaningful arguments with people, thanks to the product and the data it provides. It has been really good to have some leverage behind my suspicions.

The identification of the user, location, manager, medications, and data fields makes the process easier. The needed data fields are available, and that makes it easier to quickly investigate and determine the risk.

We have had some events where our analytics were unreliable in terms of identifying drug diversion. Protenus has made improvements to their algorithm and analytics, so we hope they will be able to correct things in the coming year.

We had to work with Protenus to update their data because there were some nuances. It is always hard to tell what is going into the analytics, and the system neglected to identify a person it should have identified. The vendor took our feedback and updated their algorithm, so the system is now working. It was good to get the vendor to work with us to address something.

Most of the analytics are analytics that we need, but there is a lot of gray area around the explanation of the Z scores and other statistics in the product.

Protenus' system catches suspicious activity before we are even aware. It promotes investigation pretty well.

Protenus has come a long way in terms of development and continuing to develop analytics that accurately highlights investigational needs.

We are getting some false positives. However, there are other things that I want to look at the tool for. Protenus is bringing to light some of the cases that probably would have fallen through the cracks in the past.

The product does scoring. It will give us a rating of how likely we are to need to investigate a certain case further. It scales each case against other cases in our data set, and it will say which one has the highest score and that we should be looking into. It won't say something is a problem; it will say how something looks on the scale and what we should go check out. The product points us in the right direction.

The analytics are dependent on the organizational culture. If a practice is loose, then the analytics will reflect that. I am seeing more cases to review that appear to be policy violations or sloppy practices more than diversions.

I think there is a lot of information in Protenus Diversion Analytics that is helpful and that I use outside of just what is flagged for me by the tool. That is because the cases that are generated through the analytics have been really great at detecting practices I would want to address. But the product seems to be catching more bad practices than instances of diversion right now.

In the areas where Protenus Diversion Analytics works, such as the inpatient areas, the system works great.

Rate your vendor's AI/ML algorithms that improve drug diversion effectiveness.

BD

BD continues to improve their algorithms and provide frequent software updates and enhancements.

We utilize AI for risk scoring, but that is a work in progress.

Due to the product's limitations, sometimes the scores are falsely elevated.

BD HealthSight Diversion Management doesn't appear to be learning from the trends it encounters.

In theory, AI has really fine-tuned things.

The algorithms that the system uses are good at highlighting things that need further investigation.

BD does a good job in areas with AI, such as medical-surgical nursing, which is our bread and butter. BD can forecast things and use some of their machine learning to extrapolate and come up with useful information.

The learning algorithms appear to be getting better and better as our system and the accumulation of the data mature.

The system just did an upgrade that changed some of the algorithms to make it easier for us to target high-risk areas.

The product gives us lots of feedback and tells us what people are doing with the drugs if they are late in giving them. There are a lot of different algorithms that point us to the people that we need to be looking at.

Our monthly audits of staff are determined by using the controlled-substance compliance and standard deviation reports. Utilizing those reports has made our audits more streamlined.

The system apparently uses AI but not in a meaningful way for detecting diversion.

I can't say that I have seen the system improve over the years that we have had it.

With the system's AI capabilities, I can definitely see that the data is becoming more robust as the system matures. We knew that this application was like an IBM Big Blue type of technology. The system has AI technology, so the more data it receives and the more time that we are up and running with this product, the smarter the product gets. We are definitely getting some good trail crumbs that we can follow for our investigations, so the system is definitely becoming more and more robust. It is getting smarter, and that is exciting. The application is getting better just from us requesting things that we recognize and giving feedback to BD. If we didn't have a relationship with the vendor, things would be tough. We have a very complex, complicated set of information that we have to pull together from multiple systems. The way that BD has been able to integrate their system with our EMR and identify paths that we need to look at a little more closely has gotten better.

I think this is the nature of any AI or machine learning, but the system still relies on us to identify and give feedback to the developer teams. We have had this system for a number of years now, but we had a couple of diversion cases that the system didn't pick up, and we had to work with BD to walk through those cases, validate them, and make some adjustments. Particularly in systems that result in human behavior, a lot of the ownership is on the organization to utilize and provide that feedback versus an inventory management system that we just pull information from.

Bluesight

ControlCheck has different settings, so we can put things into the data and take things out. Basically, we can customize our searches.

Not everything is going to be perfect, and the program will be a work in progress. We have to figure out the missing outliers and audit everything.

AI and machine learning algorithms are Bluesight's strengths. There is still some work to do. With AI and machine learning, there is more predictive modeling, and I think the vendor needs to go a little further in that direction.

The process with the vendor's product is much better than what we were doing with our previous products.

Our sites appreciate the analytics that come with the application.

False positives are greatly reduced from previous reports, but some nondiversion mistakes in documentation still skew the data for some users.

We are giving the feature the benefit of the doubt. Our volume is not enough to fully realize this benefit.

We have a constant ongoing issue related to doses that require multiple strengths. Bluesight is not able to interpret the algorithm, so it flags things as false positives.

If Bluesight added a few more data points to their solution, that would clean up the data and really highlight people that are diverting. Right now, the data is just not fully cleaned enough.

ControlCheck does a great job of bringing forward something that we need to look at, but it is often not the case that we need to look at something because it is a diversion. Usually, the solution is helping us uncover a bad practice, and that is useful. But I am not sure that we are necessarily seeing the AI adapt. Sometimes an issue is still brought forward after we train the AI to ignore it.

There is definitely an equation, but it is not advanced machine learning. It is definitely not AI.

HelioMetrics

HelioMetrics' system has a converter scoring tool, and I do an investigation on anybody who scores outside the rest of their unit. Usually, I find some sort of bad habit or practice, and when I pass that along to the nurse manager, the person in question improves. The product's diverter scoring is good at finding bad habits and things.

I don't know whether anything is changing over time or whether the system is analyzing our data and the system is changing. I know that the system does create new dashboards based on national trends, but I don't know whether that is applicable because the system isn't detecting the diversion; it is taking our data and displaying it for us.

As far as I am aware, HelioMetrics' system does not use any AI to adapt visualizations or enhance effectiveness.

The product doesn't use AI, but in my opinion, AI isn't what I need for driving investigations. The product does normalize data so that I can see how people compare to each other and note which people are in standard deviations outside the norm.

Imprivata

The system is working to avoid having us look at things over and over again that we have already determined aren't necessarily diversion related.

FairWarning Drug Diversion Intelligence does not have the functionality to utilize AI or machine learning algorithms to improve diversion program effectiveness at this time.

Imprivata's system doesn't use any of the intelligence things. The system is just the standard deviation, so I wouldn't say it is learning or using AI.

The vendor says they have algorithms, but I don't know how much of the system is algorithms and how much of it is canned reports. We are getting more than we had before, and that is very helpful, but I can't tell whether there is AI.

The algorithms are very robust for finding issues with waste documentation. It is amazing to see how many people do not waste things properly. Once those people are identified, we correct them quickly.

A lot of things are still new for Imprivata.

Invistics

There is room for improvement when it comes to machine learning and false positives. We flag unknown diversions by transaction and not by person. That is limiting because we have to go back and flag every transaction to get an accurate representation of a diverting action. However, the AI looks for risks fairly well. The vendor makes adjustments when they can see that something is not useful.

The product detects most missing drugs immediately; it usually catches concerning things before I am contacted by clinical staff.

The product gives us heatmap information so we can concentrate on certain areas or users.

The system is very complex, and it works in the background. We see how things work when the vendor tweaks things based on the user-group feedback we provide on a quarterly basis. But we see less attention from the vendor when they ask us to do assessments based on each transaction. We don't get the feeling that those assessments are being followed up on consistently.

I am not sure how much AI is being used as opposed to individuals getting specific risk scores based on their transactions. As their scores go up, they show up for us.

Protenus

I haven't noticed much of a difference.

We are able to train the product to match our organizational policies.

The system's analytics have been unreliable in the last year.

It seems like the product does learn from everything that we teach it in terms of confirming or denying certain instances.

Protenus is building their algorithms. They have spent some time helping us understand how they train the machine and why there are gaps. There is an ongoing commitment from Protenus to continue to improve things.

Protenus' system learns from us well. We see more and more cases we need to respond to because the program learns what we are interested in seeing.

I know there were two issues found, so Protenus had to be doing something right.

Protenus told me recently that they updated the algorithm, but I know that there are other tweaks that have happened in the algorithm that may not be fully published.

I don't know whether I am at a point where I can prove that AI algorithms are working to improve diversion program effectiveness. In theory, they should be, but I have no proof of concept at this point.

The vendor says that they utilize AI, but I don't really see how it impacts my data. There isn't transparency with the proprietary systems.

The system has a diversion program, but it does not seem to learn from its mistakes.

I do think that Protenus Diversion Analytics is getting smarter over time, so I think that the data that is available is definitely helping to inform my overall program. I am not sure I am using it the way that Protenus envisioned, but one of the great things about the tool is that I can use the data to do things even that the vendor maybe didn't think I could use the tool for. There is a lot of useful information in the tool that does help me through the algorithms and that improves my program even outside the tool. For example, I pull a lot of data extracts just out of the bulk source. I can have my case generations organized by incident, or I can do mass exports by provider. The solution really lets me coalesce information in a way that I can manipulate, and it really helps me to centralize things. I know I can go to Protenus Diversion Analytics and pull everything I need instead of going to multiple sources to get the same information.

Rate your vendor's investigational workflows and documentation tools (including cross-team collaboration tools).

BD

There is a process for documentation within the investigations tab; however, currently, there is no way to document against specific transactions on the reconciliation tab. I understand that functionality will be available in an upcoming software release.

We have the ability to create an investigation in the program and send it to other people to collaborate. The investigations are tied to the users, and other information that we need has to be described in the comments.

The product requires the users to log in, which requires continuing education. Also, if I am timing how long it takes to resolve something but reassign the project to somebody else, the system just restarts the clock.

If we have a traveler working, the product doesn't compile their information. Things are separate for each site, so if someone is diverting at multiple sites, it is up to each site to catch the diversion.

BD HealthSight Diversion Management does a decent job of cataloging things. For example, it catalogs why we manually defer a user's risk for some time and for how long. When we open investigations, it is easy to assign auditors and investigators and document additions to the investigation. It is easy to review things when we have closed an investigation or have to reopen it. Everything is fairly accessible and easy to navigate.

An effort has been made on BD's behalf to try and get us workflows, but we haven't been able to find one that truly fits our staffing levels. Using the product is simply too time consuming.

The investigational-workflow and documentation tools are a little cumbersome for our nurses to use.

The system is really nice in that any investigations we do on a person stay in the program. If somebody I have investigated pops up again after months, we can see previous investigations and map trends.

Cross-team workflows are a strong point for BD. Everybody can take a look at things and save documentation. Our nurse partners can look at things. If we have to come back to something for a legal reason, we can retrieve everything. BD has done a good job.

The investigational workflow is lean and effective.

I am not currently utilizing the documentation tools.

The workflow is fine, but we don't utilize it a lot because of our setup. We prefer to have the system strictly within the pharmacy, and then if we have an issue, we send the data out to our nursing areas. We haven't utilized the functionality for cross-team collaboration very frequently because the nurse managers have changed so frequently in our system. We have had to constantly add and subtract the managers. Honestly, if we get to a point where we are really having to investigate something, then set up a meeting anyway.

The tool is there, but we are just not using it. We don't have our nurses using this tool because of the issues we have with false positives. We thought that the nurses would lose trust in the tool if we didn't filter it for them, so I think it will work within the pharmacy team, but it has some ways to go.

It is nice that we have one platform we can put things into. Getting that ready is a heavy lift on the user-training side, but once the system is live, we can put everything in one spot.

Bluesight

The investigational workflow and documentation tools are not very user friendly. There may have been an update since I launched an investigation last, but the last time I used the product, I couldn't reopen an investigation that I closed. I think I can put in a comment, but I have to restart investigations.

We like that the Bluesight system helps us collaborate across all the different disciplines. Everyone has access, and it offers effective messaging across the teams.

We have not changed our internal workflow after switching to ControlCheck.

The ability to add collaborators for investigations is really helpful.

The system is fully customizable.

We have not utilized cross-team collaboration outside of pharmacy reporting at this time.

The investigation portfolio portion of the software is fabulous and customizable. Being able to have a single repository location where I can upload files and keep an ongoing timeline in one location forever is great. The problem is that the PDFs option for printing those files doesn't work. The product just prints what we see on the page, and we have to MacGyver together the information when a regulatory agency follows up and wants information about a specific diversion event.

When we look at other software, ControlCheck is definitely above them when it comes to documentation. I can easily document things. ControlCheck is very easy to use. We can attach things to our investigation file inside. I do like that feature; it is very user friendly.

ControlCheck has a nice way to capture everything and document it, but the person who opens an investigation has to close it. Some people open an investigation and assign it to someone else closer to that end user to investigate, and the second person has to reach out to the original person to close the investigation. Because of that, it is hard for us to run analytics because it ends up looking like one team is opening and closing investigations, but that is not what is going on. We would rather be able to capture who is doing the investigation so that we can see whether there is some type of pattern in different departments.

The product's documentation tools are a little lacking. There are a handful of selections and some pretax functions, and it is up to us to figure out how we are going to export things and share them with our institution and leaders.

We don't use the piece for cross-team collaboration, but we do use the investigational workflow and tools.

HelioMetrics

The product's real value is in its investigation and pulling of data.

When nurse managers look at the reports I pull, they appreciate the preferred reports from Drug Diversion Analytics. However, at that point, the reports are not interactive. When a nurse has a question about the reports, they are looking at a flat screen instead of what the system is truly capable of. But that is on my nurse managers.

The vendor has an investigation dashboard, but we don't really use it because it doesn't really work for us.

The main thing that could be improved is providing a way for me to document things in the system, so I want a way to put notes or something like that in the system.

HelioMetrics does have investigational tools available, and the product is capable of doing deep dives into a specific user's history. I am not entirely sure about the cross-team collaboration part, but the data can certainly be interpreted by multiple teams.

We haven't used the investigational workflow and documentation tools yet, but they are available.

Imprivata

Things are pretty well organized within the application. It is very straightforward and easy to find things.

We have great cross-team collaboration.

FairWarning Drug Diversion Intelligence does not have the functionality for investigational workflow and documentation tools at this time.

We meet every two weeks and talk about all of our network issues.

There is no way to involve nurses in the software. I have to copy and paste everything and communicate via email. Many times, I close the investigation in the system and then track my progress in my email.

Imprivata has cross-team collaboration figured out.

Invistics

I want my investigations to be in one place, including documents, interviews, and questions. All that information should live with the data. That was initially part of the vendor's road map, but they are not there yet.

The investigation workflow and documentation tools are the biggest pain point in the solution. There are too many barriers in place, so there is no smooth way to communicate the data that the workflow and tools provide to clinical managers.

Flowlytics has gotten us to work more as a team, especially with external work.

The workflow is pretty solid. I think Invistics has a good handle on the documentation. I think there are things that could be better about Flowlytics. But overall, the system gives me what I need.

The workflow is not well built out. The vendor needs to do better at guiding people through the workflow.

There is room for improvement.

It would be helpful if the system's practice dashboard were prepopulated with monthly trends with the highest alert group for each care area and category, like discrepancies and null transactions. Having a discrepancy dashboard repopulate with trends at our fingertips without us needing to manually run each care area and alert type would provide us with better snapshots.

Protenus

It took some time to train our nurses on how to interpret the product's reports, but we have been able to download reports straight from the application and send them over with some of our interpretations. It has been helpful for the nurses to get a glance behind the curtain.

The nursing and pharmacy departments are notified of potential cases, and those departments can write notes to each other during the investigation.

One of my gripes with Protenus Diversion Analytics is that there are limited licenses. If I have a nurse manager and want to look at one of their incidents, I can't have them look inside the software at the holistic case management tool. Some vendors give us as much user access as we want, but Protenus is very locked down.

Protenus needs to provide or create limited access profiles so that key stakeholders can access the system and do documentation directly.

The documentation tools are great, but we cannot give access to other individuals.

I recognized something and sent it to Protenus, and then they looked at what their documents were saying.

Protenus Diversion Analytics gives a lot of flexibility with workflow and tools. Some centers want to be very type A in the weeds, and they can do things that way. If someone is more general and is looking for overall trends and documents more loosely, they can do things that way. We can document things and integrate amongst the team sort of as we see fit.

The tool has the ability for us to assign investigations internally to nursing, but we haven't turned that on. We pull the data out and spoon-feed it to the nursing department. We are maintaining everything within the incident or case that gets filed. If we are doing anecdotal things, we are able to keep those things and all of the different cases per person pulled up as we are reviewing the current case, and we are able to look back at that information. I like that all the information is there for me.

The vendor has email, documentation, downgrading, and tools to work through the investigational process and workflow. But it would be good to have a nurse tool or a corporate tool. In terms of corporate oversight and nurse tools, there could be some centralized oversight on what is going on at each facility in a landscape so that we don't have to go into each hospital. Nurses can get emails and get brought in, but they don't have the tools to log in. And that is where there is some gray area because the pharmacists think the nurses should have been brought in from the beginning, but the vendor really thinks the product should be owned by the pharmacy and that we should decide how we communicate the issues out rather than giving hundreds of people access to the tool. It makes sense from both sides, but maybe there could be some offering of a different view in the software or role-based access to documentation. In terms of delivering what the vendor promised, the product is fine and good. I just see some opportunities where the vendor could improve usage.

I have heard of some people that have utilized the tool for cross-team collaboration. The documentation tool is not useful. For instance, I can't upload investigational documents into the system. I do use the print-to-PDF function case data for clinical leaders to review. The area could use a lot of improvement. For instance, I would like to be able to quickly run an easy-to-interpret report of how an entire department is performing to share with clinical leaders. The other areas that need improvement are the KPIs and graphs.

We had to create our own documentation tool. The product is weak because it exports a PDF and doesn't allow the nursing staff or anesthesia staff to log in to the system.

Protenus Diversion Analytics is really good for my own personal workflow, but I don't really use it for cross-team collaboration.

Protenus Diversion Analytics is really good at investigational-workflow and documentation tools. I am not sure that there is anything better. Protenus is meeting our specific needs.

Rate your vendor's complete transaction auditing and reconciliation.

BD

We are unable to reconcile continuous infusions and PCA administrations.

Reconciliation is based on dispenses from the system and matches to a documented administration. Any administration without a corresponding dispense might not be caught; sometimes those occurrences show as an additional dose if a dispense for the same medication has occurred before. There is no way to complete or document notes on the reconciliation screen. The vendor recently added the ability to include a user-defined review time for administrations prior to dispensing.

I would like for the product to handle drips better.

BD HealthSight Diversion Management is more robust than our old system was.

BD HealthSight Diversion Management's transaction auditing and reconciliation are incomplete. In procedural areas, there is no reconciliation at all. Additionally, the product doesn't know how to respond to infusions. With epidurals, for example, BD HealthSight Diversion Management can't discern any information from the removal, waste, or administration of products.

The transaction auditing and reconciliation that I have gotten through looks really good.

There is a great process for documenting and tracking all audits and investigations.

The data in the system is almost completely accurate, and that helps our process move along more quickly.

The reconciliation function works well except for the continuous infusions and patient-controlled analgesia.

The system is fairly accurate, and for the most part, the system is relatively timely. It just has a few bugs.

We talked about the difficult data sets that are still gaps. The tool does a pretty good job on the inpatient side. I think we did an analysis at one point, and the system was covering 95% of the doses in the inpatient areas, so the PCAs and epidurals weren't being addressed. But our procedural areas are very high in volume for controls. Our total house coverage was much lower at about 40% or 50%.

BD HealthSight Diversion Management can do the basic functions that one would traditionally look at for drug diversion software. However, BD HealthSight Diversion Management doesn't have the ability to do advanced items, like work schedules and integration with our scheduler and timekeeper, out of the box.

Bluesight

We can follow a drug from the dispense to the administration and the waste. We can follow the complete transaction.

Some of the data points are missing. Sometimes, if a drug is not entered correctly, the Bluesight system will miss it. There are transactions that occur outside the system that the system can't capture, so we have to go back and manually do a bunch of data adjustments.

The product is very impressive in the auditing area. The downside is that the product adds a ton of previously unidentified work.

The product is inclusive of most transactions. The vendor is working to include infusions and PCAs.

The vendor is working on a version that will allow us to rebuild transaction groupings if they are incorrectly paired. That will help us get more accurate scores. That version is not live yet though. The complete auditing process would not be possible without the tool.

The current closure rate is 98.9%-99% of transactions.

When automated data feeds into ControlCheck, it works as intended. Manual processes like those for anesthesia documentation slow things down and skew the data because the system cannot automatically resolve those transactions.

ControlCheck really does provide complete transaction auditing and reconciliation, but we are still missing the piece about infusions and the drugs that come out of our big safe. But the other data coming from our smaller medication stations is really working well.

The product does well when it comes to complete transaction auditing and reconciliation. I struggle a bit with the auditing piece because some data is not being captured.

We are having some data issues with our source files. There could be some better infrastructure in the mapping from the source files that get uploaded. We upload transactions, and then the vendor sometimes tells me that the transaction is not there when I have a variance, but I see the transaction. But that issue sometimes gets pushed back to the client to figure out versus the vendor figuring it out. The vendor should be figuring the issue out because we are giving them the data.

HelioMetrics

We can quickly find EMR dispensing cabinet data, and it matches up very well. I occasionally get false positives, but they are quickly done away with, and I can move on. I rarely have an unreconciled dose that is truly unreconciled. I don't get false negatives.

Transactions can be audited effectively; however, I have been told by users that the reconciliation piece of the software is lacking and often incorrect, leading to extra work.

The HelioMetrics product has a section that allows us to see overall dispense reconciliation and will break it down by user, patient, location, drug, and things like that. There are some instances when the product isn't perfect, such as overrides in inventory dispense or errors that muddy the water. I doubt that any system gets everything 100% right.

Imprivata

The auditing tools seem to get things back fairly quickly. If we want to run an audit, any reports, or a reconciliation of anything, there is a pretty quick turnaround.

The transaction auditing and reconciliation is comprehensive.

Imprivata will talk with us when they do their audits. If we have an issue, we go back to the vendor, and they are very helpful in helping us dig through other data and in making suggestions as to how we can find a way to dig a little deeper. They are very good at that.

The product gives us information on everything including our cabinets, the EHR, our waste, and even our own pharmacy folks.

The representative from FairWarning always follows up to see whether I need anything with ongoing investigations.

Part of our contract includes an auditor who helps find issues and reports to things us for follow-up.

Invistics

There is always room for improvement, but auditing and reconciliation of transactions are where the product excels. The product monitors the inpatient, outpatient, pharmacy, and anesthesia sides very well.

The transaction auditing and reconciliation functionalities allow us to dig deeper with Cerner and BD information.

It would be great if every tech-related thing worked perfectly. But we know that is not the case. The system can't really handle bulk items. We basically have to put everything into a coverage area where the vendor gets the information. But the vendor doesn't do anything with the information because the processes are too complicated for them to code into their solution. The vendor is working on

things, but some things don't get looked at because the vendor essentially can't handle those things. A couple of our pharmacies have multiple controlled-substance vaults, and that makes the transfer of drugs between vaults confusing. The system doesn't do a good job of handling those transfers. The system does a great job if the transactions are easy and basic. But the system can't handle anything complicated, such as taking out three controlled substances to make a kit and putting that kit back in the vault. The items and requests that can't be handled wind up back in the coverage area again. We have the ability to see those things if we want to, but we don't get any alerts about those things.

Protenus

We didn't have transaction auditing and reconciliation before, and we haven't had an issue at all with getting that functionality up and running; the functionality has been very easy to use. Every poll is audited, and that is awesome.

As we work with our representative on monthly calls, we are better able to customize the software to our needs. That helps us better determine true diversion cases.

The system has been pretty effective in identifying discrepant fees.

Protenus' system completes transaction audits and reconciliations really well. The vendor has put a lot of focus on those and has built a UI that makes it easy to review things. They are doing a good job.

There have been hiccups in the data. Sometimes there are duplicate entries or unreconciled instances that aren't truly unreconciled.

I think Protenus is focused on identifying diversion, but if we do a complete hospital-wide transaction, the product will do transaction auditing and reconciliation. It is just not as easy to pull that data out. I can get reports for all my unreconciled doses, but that is not as easy to get to.

The data is retroactive for approximately four days. However, I have found it to be much more accurate in closed-loop reconciliation.

The product is very manual, but it does do some automation that is not completely accurate. When I run the manual reports, I would say they are accurate more often than not.

There are still some misfires in the reconciliation point in Protenus Diversion Analytics that I am having to do some duplicate work for. The vendor is working to address those concerns, but the product is not quite where I would ideally have it.

Additional comments

BD

We can meet with the vendor, and if we don't need anything, then we can push back our meetings. The vendor checks in on us, and they set up times to walk our new staff members through the system. That has been very good.

Bluesight

We don't have the pharmacy-purchasing portion of the product. It requires an additional charge, and I just don't feel like it is worth it. But I also think that we are missing a little crossover because I have asked why a transaction isn't showing, and Bluesight has told me they don't recognize the dispenser type from our controlled substance vault but that they will look into it for a fee. And at this point, it is thousands of dollars to do upgrades that we need, and I don't know whether it is worth putting that money into the product because it still doesn't calculate our fentanyl infusions for us.

HelioMetrics

My main wish-list item would be to be able to place my own comments. When I have looked at somebody in the system, I want to know that I have looked at them by having documentation that they have been looked at.

Drug Diversion Analytics has helped us better our practices, identify sloppy practices, and even identify drug diversions.

Some things are hard for me to rate because we are transitioning to a new software platform, which is not being integrated into the HelioMetrics platform. The HelioMetrics customer support team has been excellent through that transition, and they are getting two feeds of data from different sources.

Imprivata

I am sorry that I don't have two to three sentences for each section, but the functionality just doesn't exist right now. I am disappointed that all these things were advertised to us years ago but none of these things actually came to fruition. I actually don't have great news to share. While all these exciting possibilities were shared with us when we watched the demo and decided to invest in FairWarning Drug Diversion Intelligence, none of these pieces are actually up and running years into us using Imprivata's monitoring system.

Invistics

The product has made our drug diversion monitoring safer. It allows us to take proactive measures.

Protenus

There was an issue where information from the drug diversion side was being pushed over to the privacy side. I think the issue was due to the switch on the Protenus side. They took care of the issue very quickly.