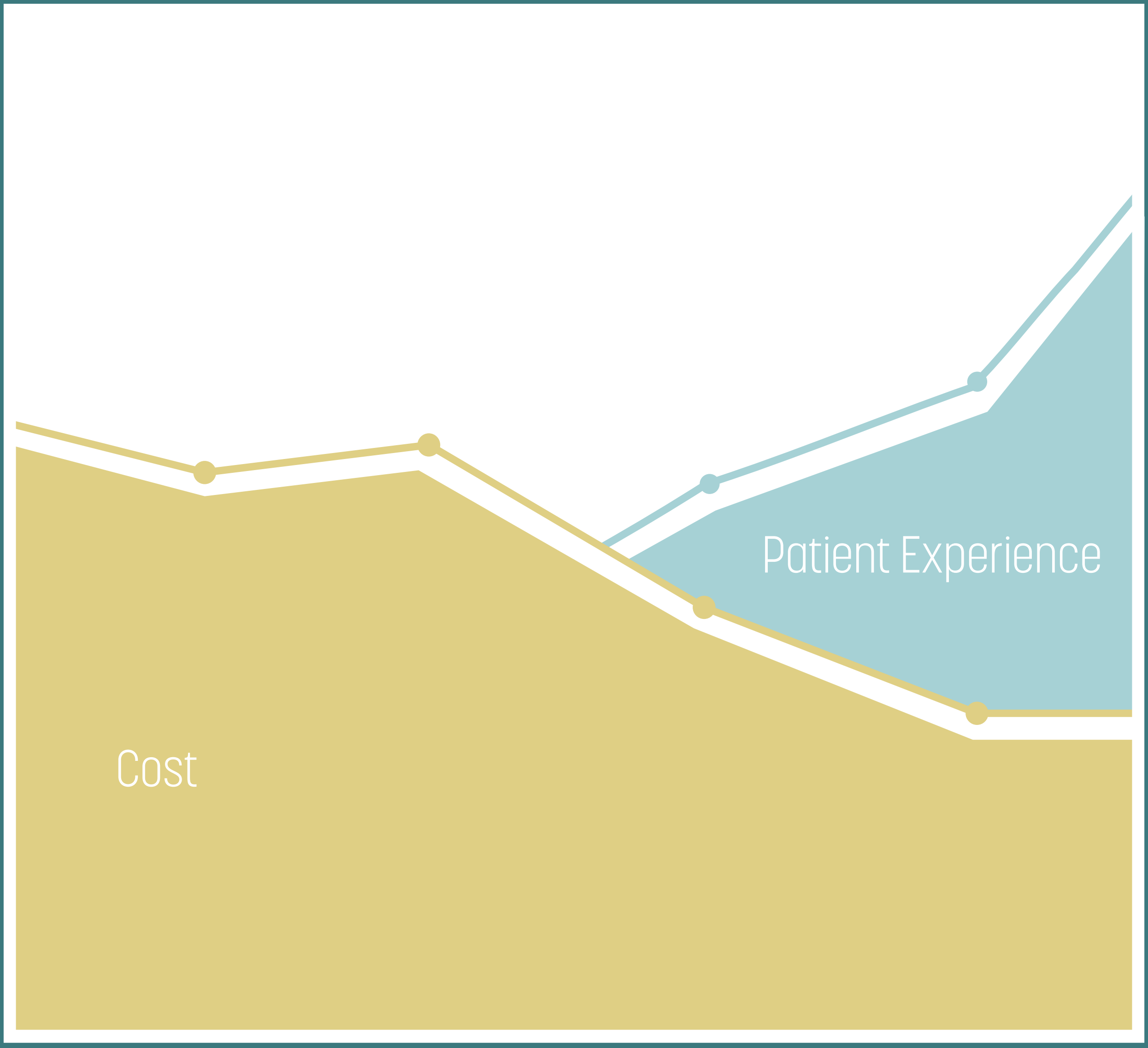
Research and Report by
peer60

DATA ANALYTICS



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PREMIUM CONTENT NOT INCLUDED IN THIS REPORT

- Preferred Analytics Approach by EHR Supplier
- Preferred Analytics Approach by Core Rev Cycle Supplier
- Preferred Analytics Approach by Participant Title
- Data Visualization Suppliers by Current EHR
- Net Promoter Scores of Data Visualization Suppliers
- Most Considered Data Visualization Suppliers for New and Replacement Business
- Data Visualization Suppliers Most At Risk of Being Replaced
- Primary Data Warehouse Suppliers by EHR Supplier
- Net Promoter Scores of Primary Warehouse Suppliers
- Most Considered Warehouse Suppliers for New and Replacement Business
- Net Promoter Scores of Analytics Consulting Firms
- Most Considered Analytics Consulting Firms for New and Replacement Business
- Net Promoter Scores of Enterprise Analytics Suppliers
- Most Considered Enterprise Analytics Suppliers for New and Replacement Business
- Detailed Trends of Shifts from Homegrown to Commercially Available Analytics Solutions
- Most Considered Suppliers Among Homegrown Participants
- Detailed Trends and Intentions of Participants with No Analytics Solutions
- Most Considered Suppliers Among Participants with No Analytics Solutions

Vendors Covered in this Report

accenture
High performance. Delivered.

The Advisory Board Company

Allscripts

BEACON PARTNERS

Cerner

DHG
DIXON HUGHES GOODMAN LLP

encore HEALTHCARE

Evident

Epic

HealthCatalyst
ignite change

HURON

IBM

IMAT SOLUTIONS

iDashboards
Driving Business Decisions

InterSystems
Health | Business | Government

KPMG

Vendors Continued

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Executive Summary

The world has embraced the power and importance of analytics, but we're all still trying to wrap our collective head around the top methods, best practices, and tools needed to get every bit of value out of our data. We've seen data analytics revolutionize sports, politics, journalism, and business in the last few years and its impact is increasing. It is a revolution that is changing the world and continues to do so with overused nebulous terms like "big data" that bring attention and visibility to a fast growing technology.

No sector of the economy could benefit more from real data analytics than healthcare. Overall, healthcare spend exceeds 3 trillion dollars annually and everyone knows (and hopes) that those expenditures can become more efficient. If the cost curve is really going to bend down or even level off, data holds the solutions that can get it done; but frankly, this is a little tougher than cracking the code to professional baseball or predicting elections. Healthcare has a greater order of magnitude — more data — to grapple with than do these other areas. Fortunately, we've taken the first step. That data has recently (mostly) been dragged out of manilla folders around the country and dropped into computer programs with the power to track and record them.

So now the tricky part: How do we analyze it? Which solutions do we use? How well do they work? This report is focused on these questions. More than 200 applicable hospital leaders gave their input. The results document the main aspects of the analytics market:

- Dashboards (data visualization software);
- Data warehousing;
- Consulting firms with analytics practices;
- And the whole enchilada...enterprise analytics (as in all of the above).

Each market has its own leaders and niches. Each has a robust replacement (or upgrade) market and a plethora of potential first-time buyers. We look into each and provide a look at where the verticals are going, and which suppliers hospitals are looking at. Before we get there, however, we review the functionality hospital leaders are focused on. While the spread of features desired is wide, some features are more dominant than others.

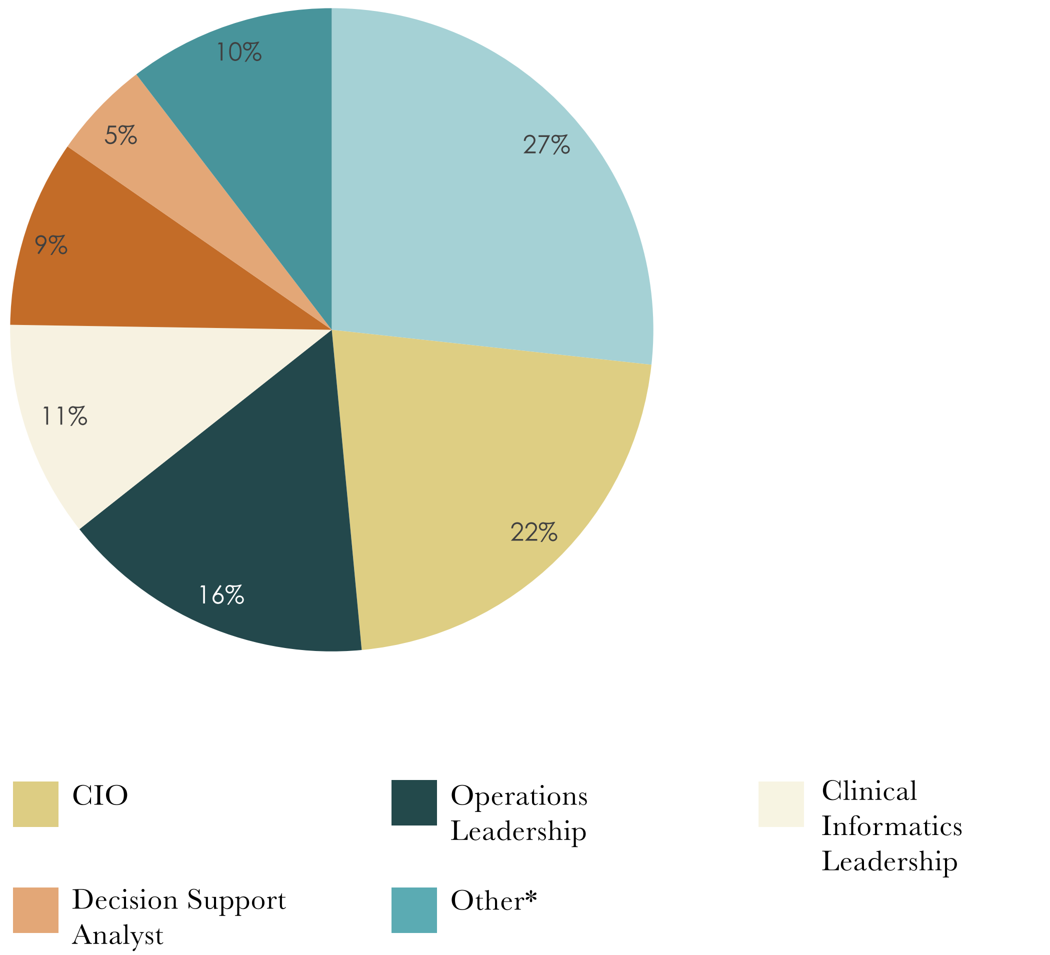
Finally, this report reviews the Net Promoter Scores of leading suppliers in each market. There is a huge disparity between the top performing companies and poor performing companies — and we normally do not see gaps this big within the same industry. There are suppliers that are beloved by their customers, and there are suppliers that are really struggling.
This guide should be a wake-up call for some suppliers. Customers have more options than ever. It takes time to change suppliers in this market, but these disparities are too wide to hold for long. As a result, the market for data analytics products will be changing dramatically over the next few years. Suppliers have been given a reprieve to get their act together, but they should consider themselves on notice.

Demographics

Before we give you a look under the hood of the data analytics market, we thought it only fair to give ourselves the same treatment. These demographics give you a look at the titles of our participants as well as the EHR and Revenue Cycle Management suppliers they use.

A diverse mix of 202 healthcare leaders with data-related titles participated in this study. We appreciate their willingness to offer feedback related to analytics trends in healthcare.

Participants by Title



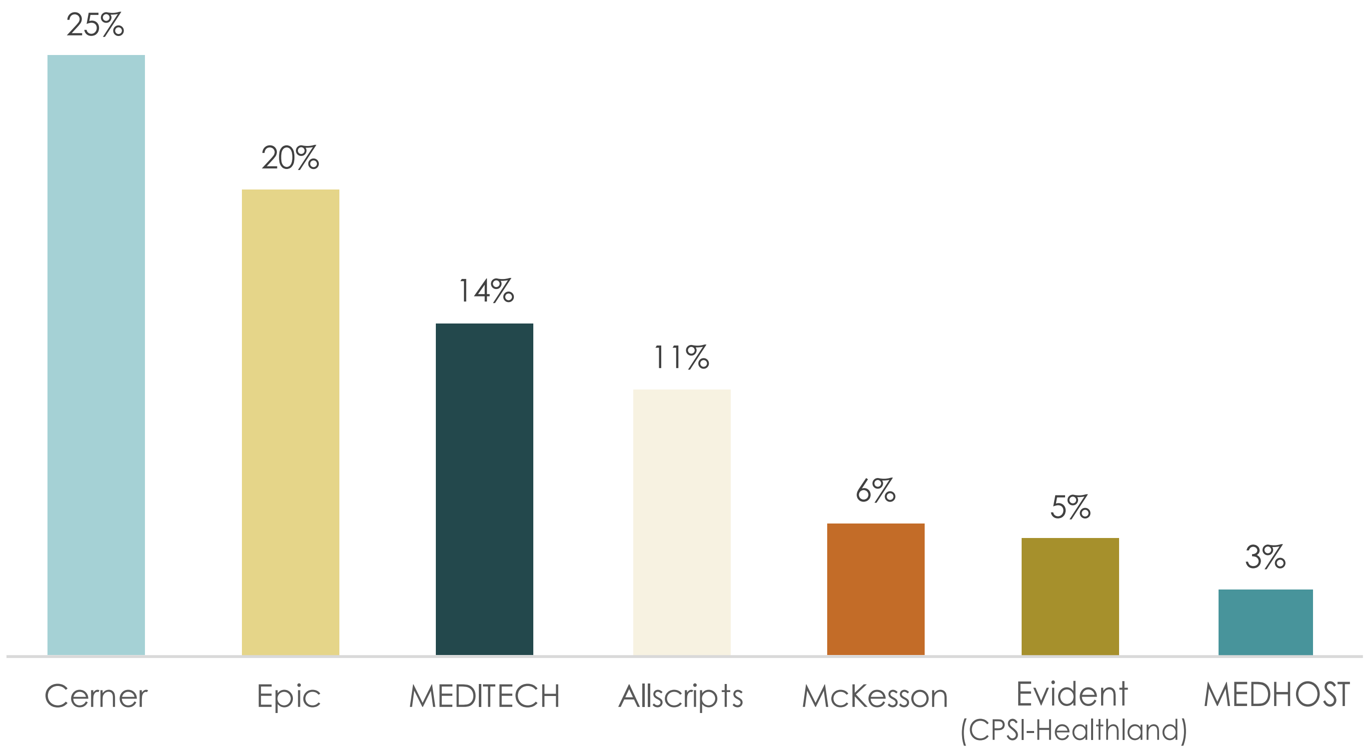
*Other= Breast Surgical Oncologist; Business Relationship Director; Comptroller, Corp Director of Licensing and Accreditation; CXO, Director - Materials Management; Director of Provider Development; Director, Radiology; EDI Coordinator/Patients Accounts Manager; Enrollment Specialist; Head Nurse; Inpatient Revenue Cycle Operations; LPN, CRC; Medical Technologist/ Assistant Director of Laboratory Services; Observation Documentation Auditor and Biller; Pricipal Consultant; Product Manager

Current EHR & Revenue Cycle Management Solutions

Data analytics solutions of all kinds rely on EHR and Revenue Cycle Management solutions, as those systems are typically where key data is created and stored. For that reason, our responses come from a cross-section of the market and are benchmarked against those two key enterprise systems. These markets are further broken down by facility size.

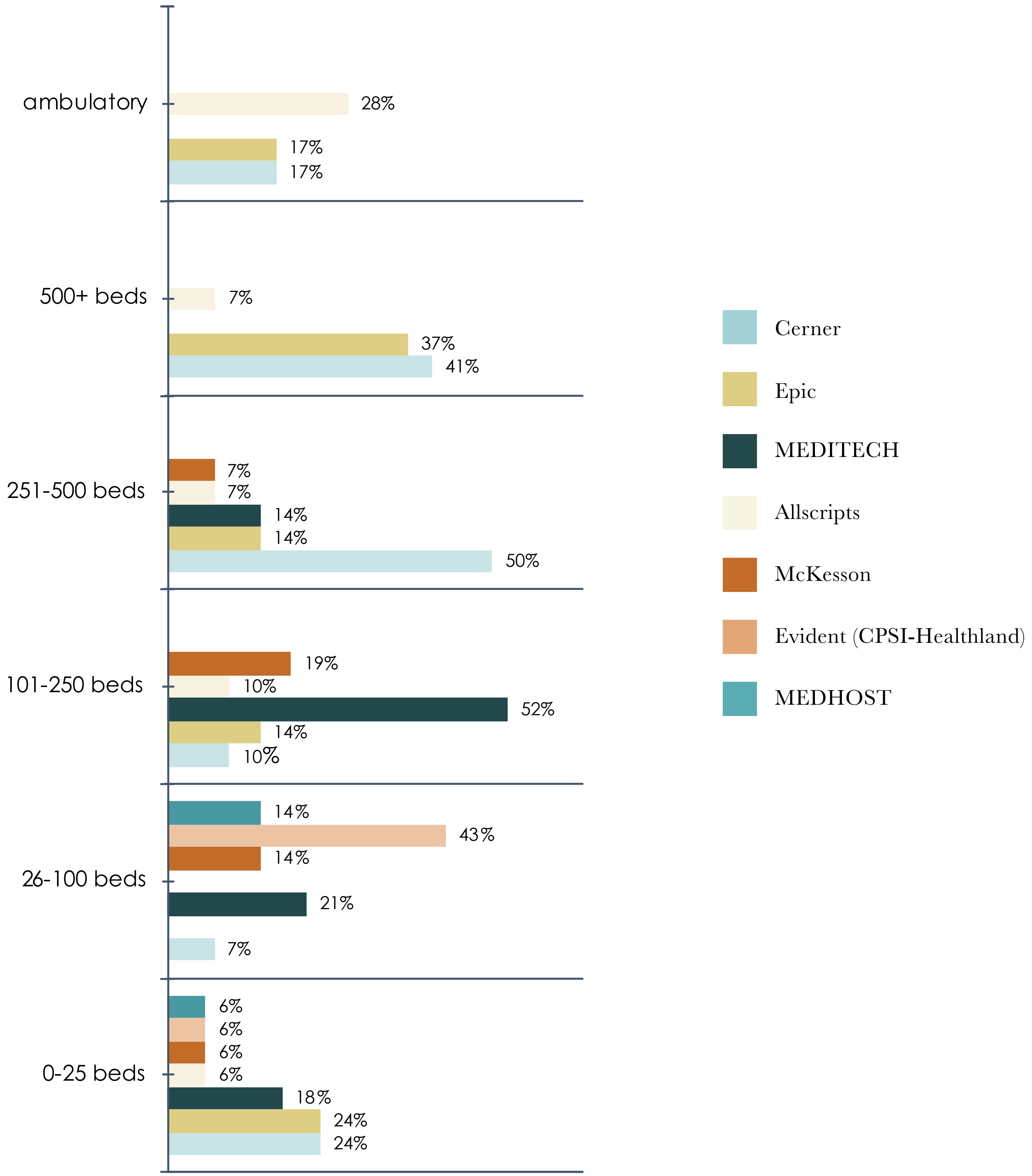
(Note: If you want more detailed information on the nature of these markets, presented with witty writing and attractive graphs, we recommend looking through our other recent reports.)

Current EHR Supplier



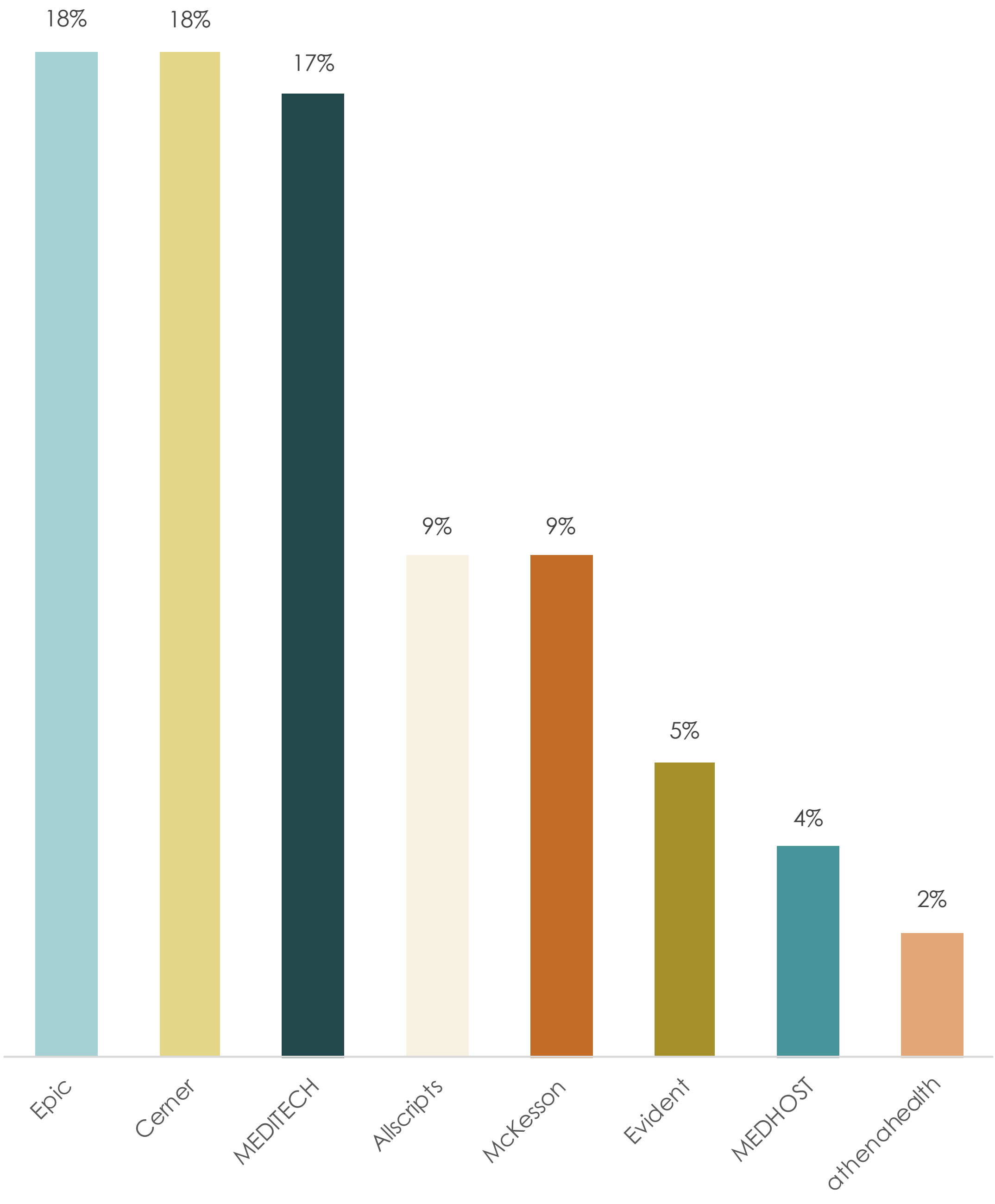
Current EHR & Revenue Cycle Management Solutions

Current EHR Supplier (by Facility Size)



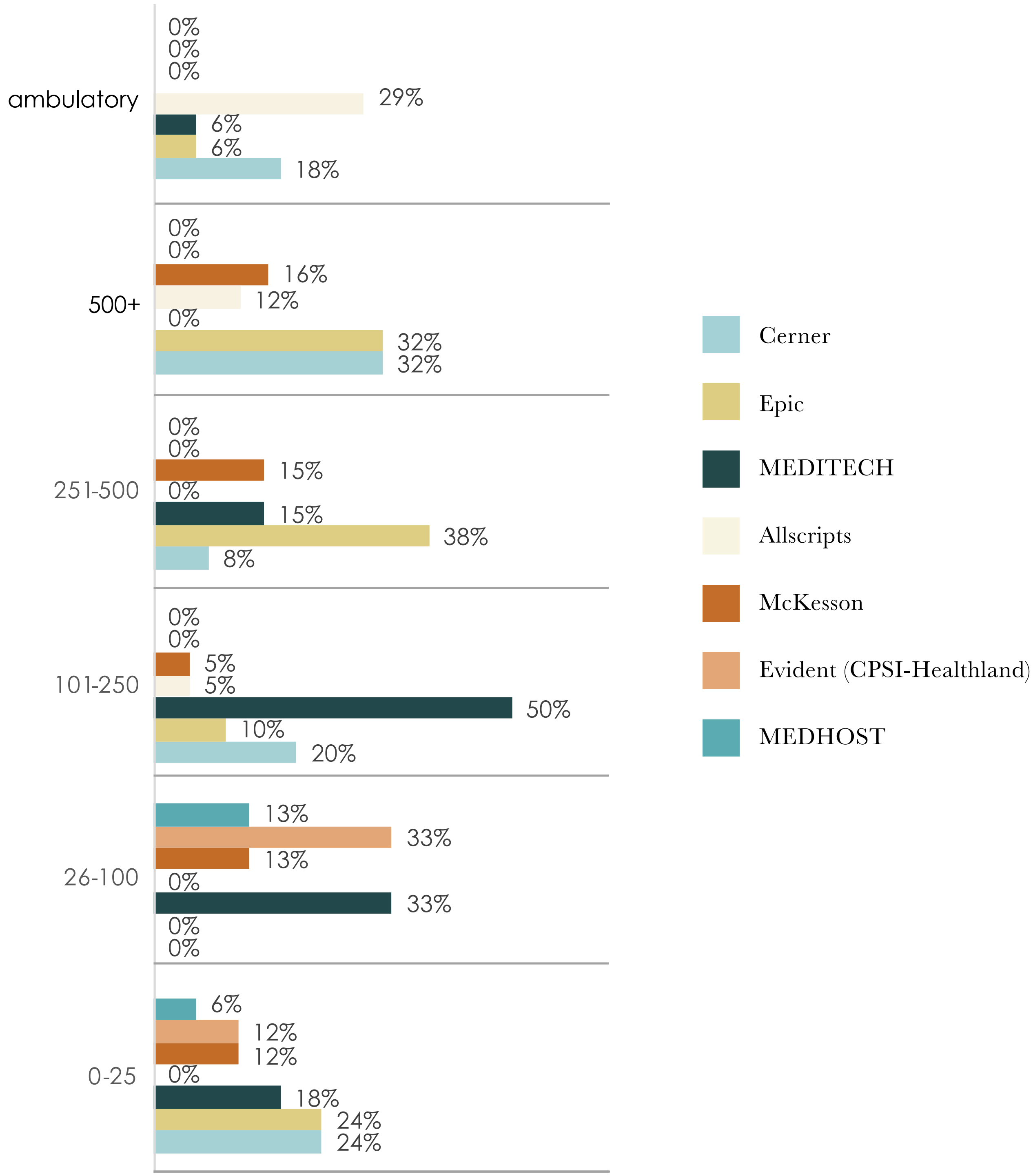
Current EHR & Revenue Cycle Management Solutions

Enterprise-Wide Revenue Cycle Management Supplier



Current EHR & Revenue Cycle Management Solutions

Enterprise-Wide Revenue Cycle Management Supplier (by Facility Size)



Areas Requiring Data Collection and Utilization

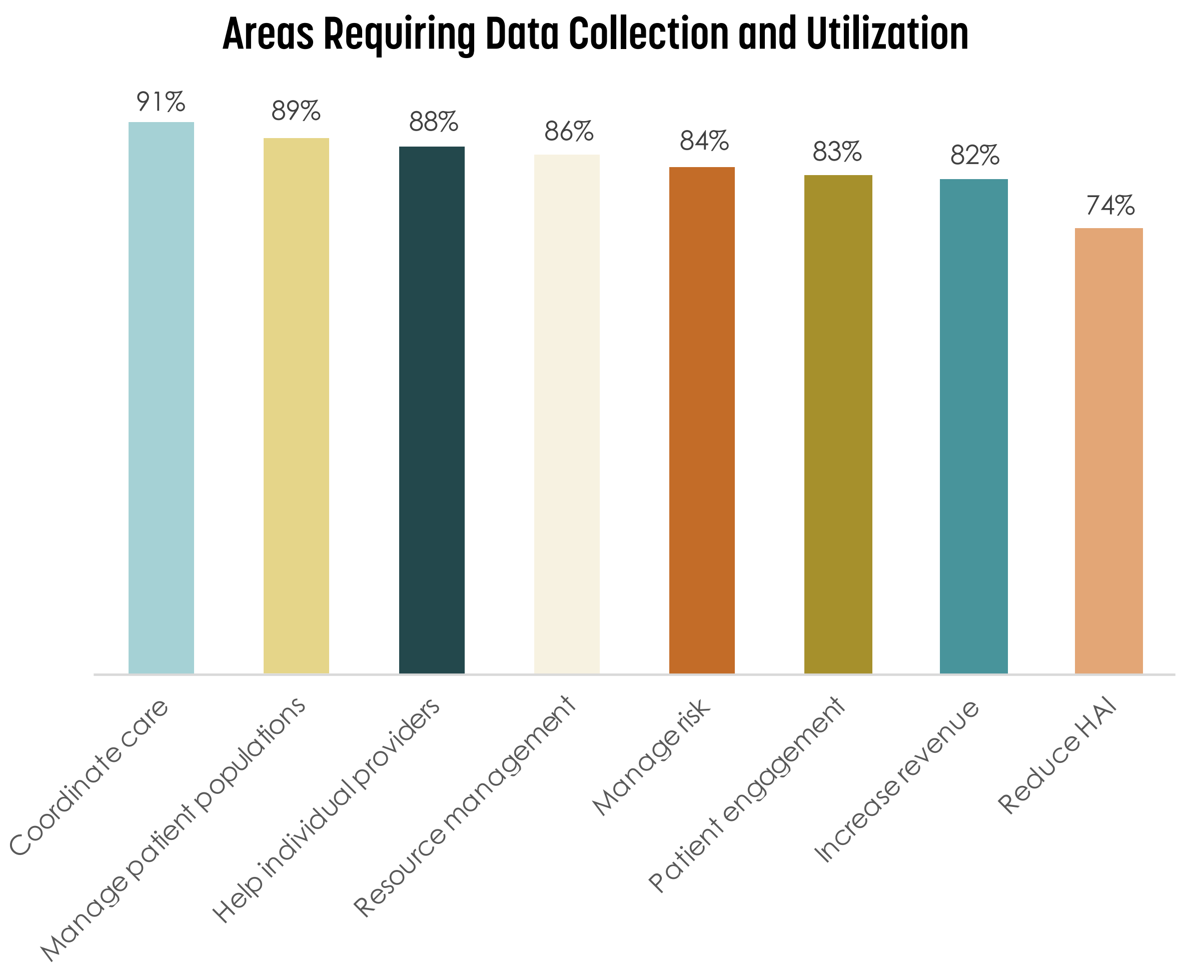
Before we dive headfirst into the various data analytics markets, let's wade around the pool and figure out why hospital leaders want data analyzed in the first place — That will give us a better look at the terrain and will help suppliers pick out the especially deep ends where there is room to roam.

Admittedly, the healthcare providers in this study appear to want data for all of the above, though some are more important than others. "Coordinating care" (91%) is a near-universal desire, while other requirements garner strong majorities as well. Providers are saying to move healthcare forward, it is critical to have have a functional data analytics strategy. Putting in an EHR and core revenue cycle management solution is like being on the 20-yard line with 80 yards left to go to reach the end zone. It's a sobering thought that tens of billions have been spent on the promise of what EHR and revenue cycle solutions were supposed to bring to provider organizations, only to realize they just got providers off the starting blocks.

Think about it: All of the areas mentioned in the chart below are critical to improving healthcare outcomes overall (both clinically and financially) and they all require robust analytics solutions to be realized. Again, the HITECH legislation was just the first step in getting healthcare turned around… and in hindsight, it was a rather small step at that.

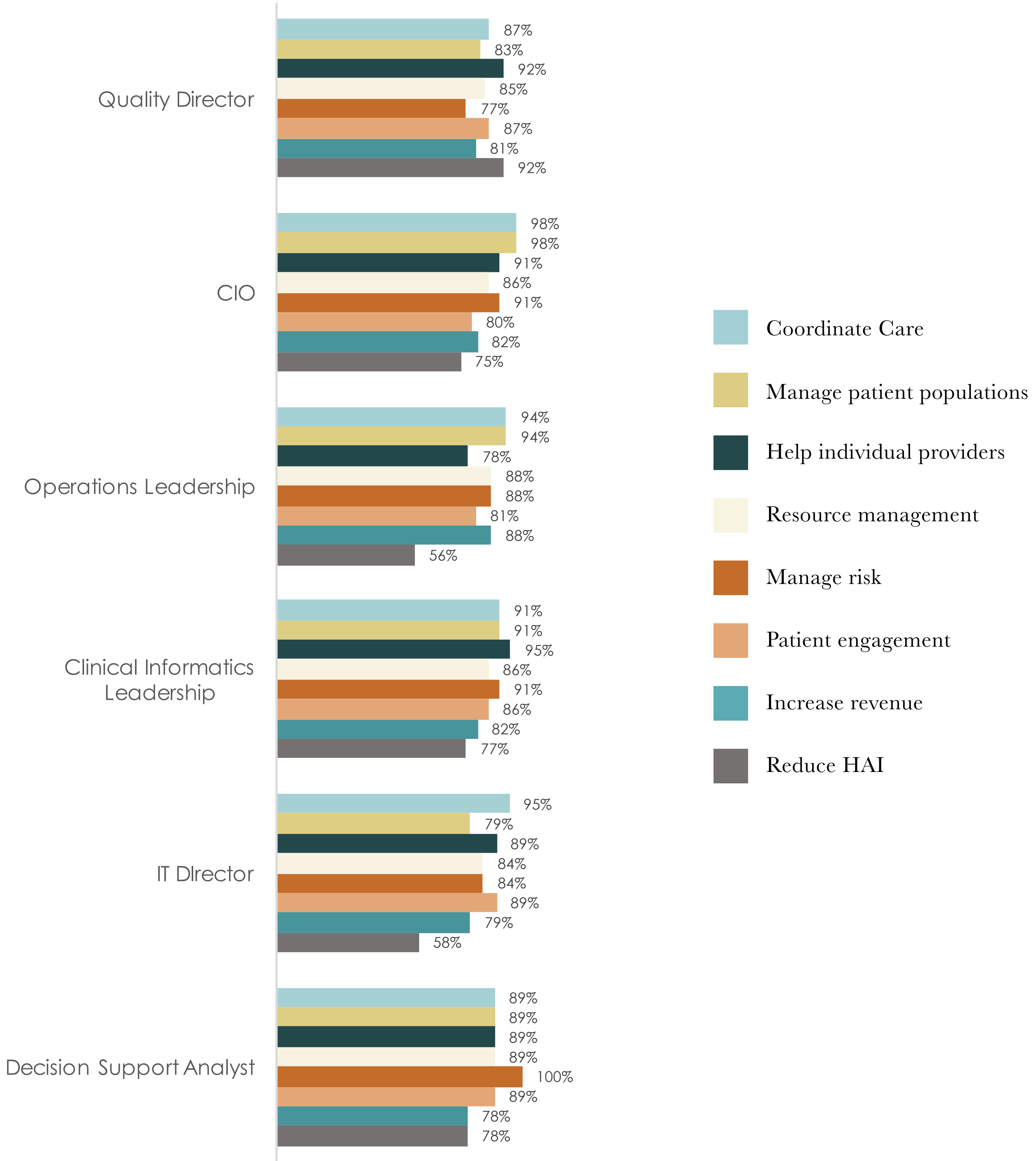
Some of these desired outcomes will inevitably depend on the role of the participant, and so the results are also broken down by job title.

(Hint: These breakouts by job title should help suppliers with their sales pitches!)



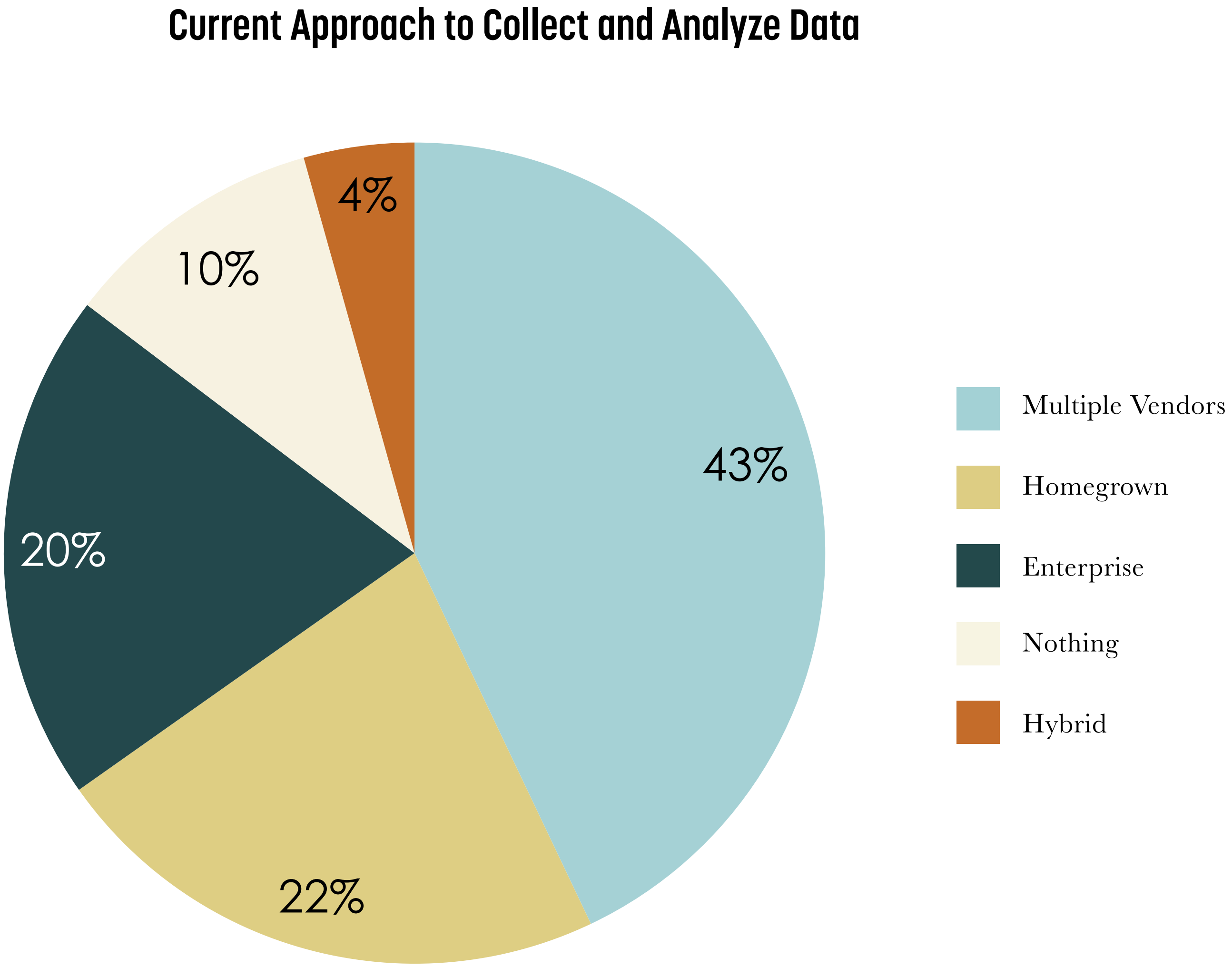
Areas Requiring Data Collection and Utilization

Areas Requiring Data Collection and Utilization (by Title)



Current Approach to Collect and Analyze Data

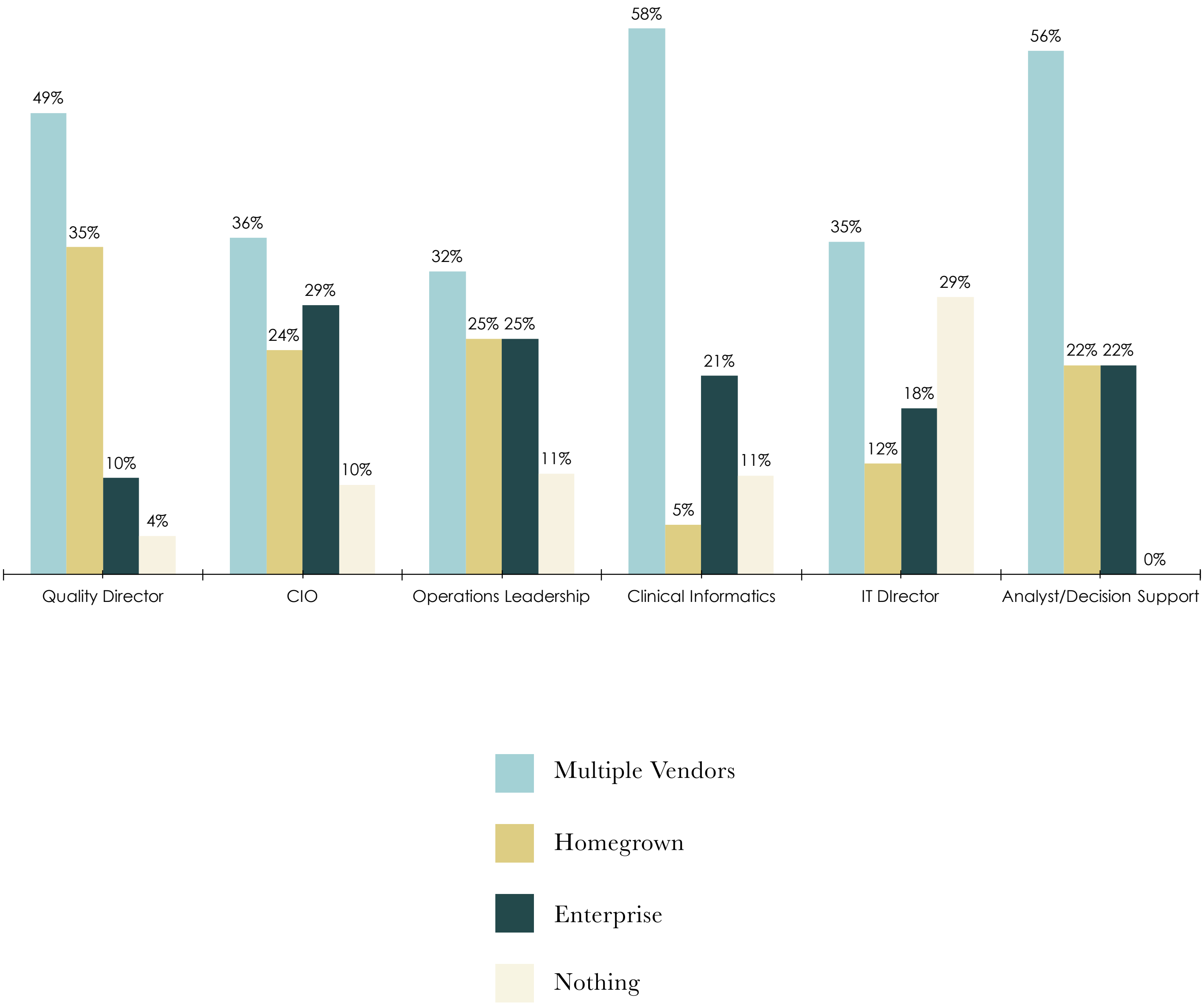
While providers are more likely to use a best-of-breed approach in developing their analytics platform, this is still a mixed bag. Just under half (43%) currently employ a multiple vendor approach, with just under a quarter (22%) cobbling together some sort of homegrown strategy. The smallest group (20%) feel that they are on their way towards an overall enterprise strategy. This obviously suggests there is not a one-size-fits-all solution to effectively gather and analyze data. Ten percent of hospitals stated they have no strategy whatsoever for dealing with their data.



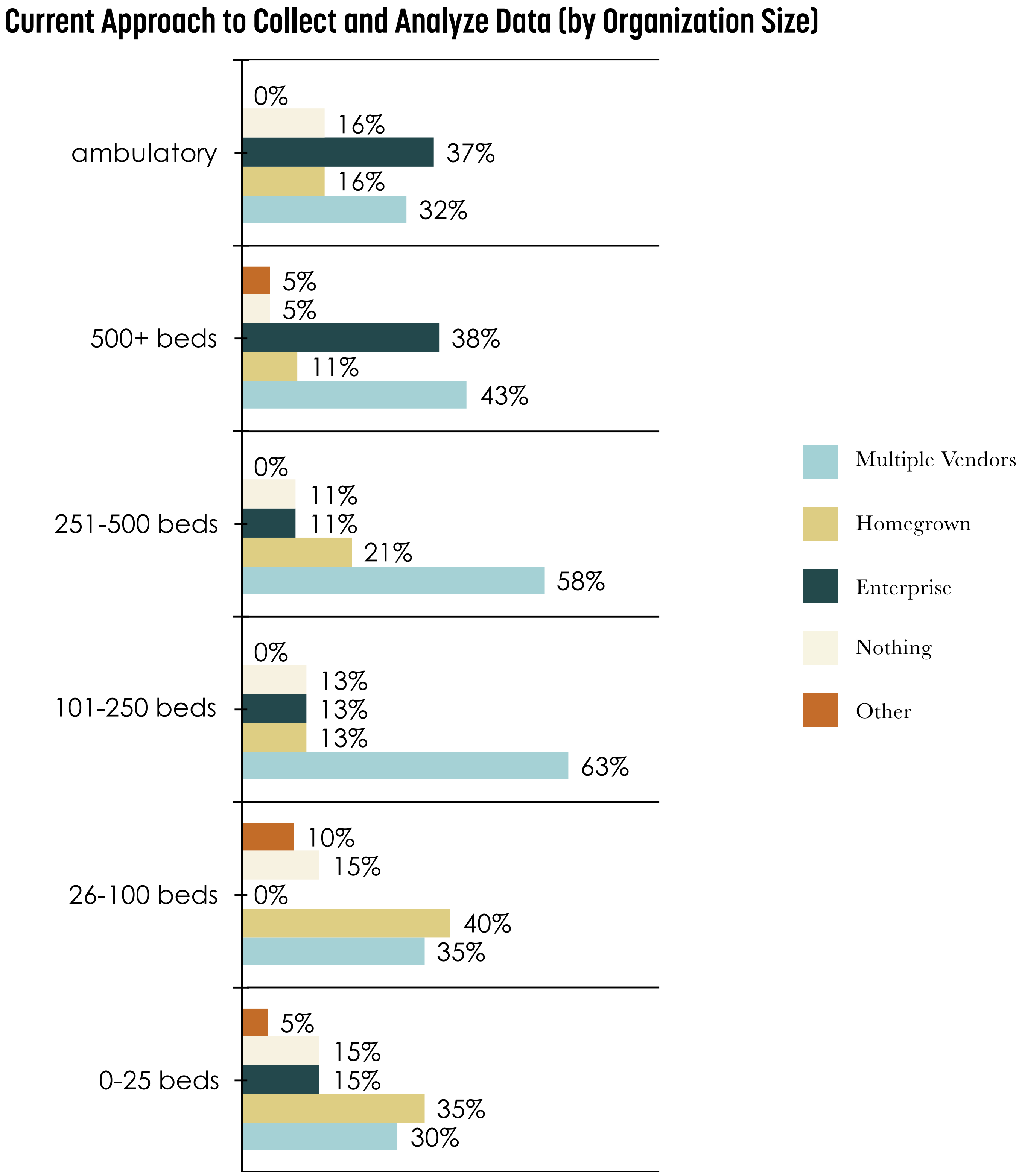
Current Approach to Collect and Analyze Data

Some specific providers seem to favor one approach over another simply by what they currently use (most notably clinical informaticists and decision support analysts). On the other end of the spectrum, suppliers with enterprise analytics solutions have the most traction with IT and operations leaders.

Current Approach to Collect and Analyze Data (by Title)



Current Approach to Collect and Analyze Data



Ideal Analytics Situation

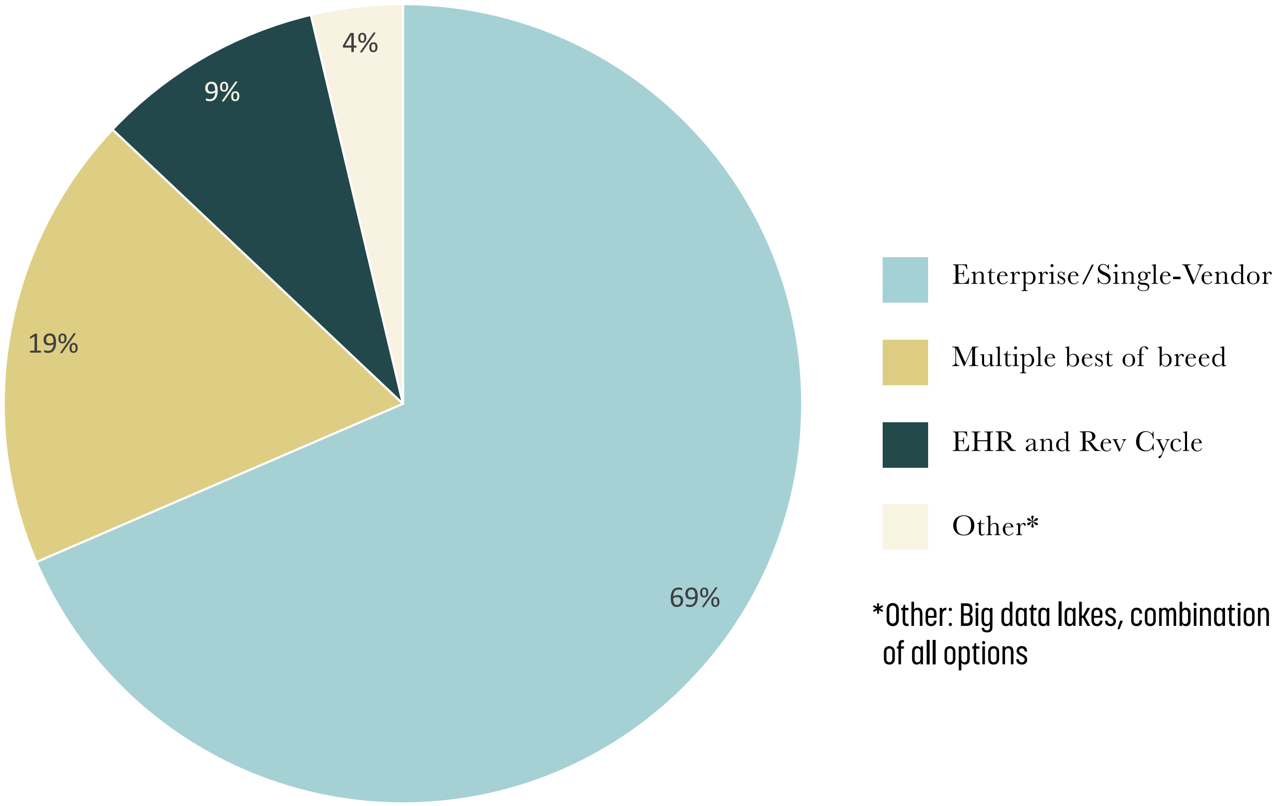
The market for true analytics solutions is very new and still settling. Because of this, we broke up our analysis into four distinct categories, but we expect that will probably change at some point in the near future. For that reason, we asked participants what the ideal approach is for the collection, utilization, and analysis of data. The idea of a single enterprise solution appeared to carry the day. These results break these opinions down based upon what providers are currently using.

Those Who Prefer a Multiple Vendor Approach

Even providers who use a best-of-breed approach tend to want a single enterprise solution instead. To quote the philosophy of Bono, "they still haven't found what (they're) looking for."

These opinions do vary depending upon the title of the participant, size of their hospital organization, and the EHR and Revenue Cycle Management solutions they use. In particular, the lack of support for an enterprise solution among the analyst grouping is significant. It suggests that the idea of a single enterprise solution inherently makes sense to c-levels who, by the very nature of their respective roles, are forced to consider the bigger picture, while for "analysts" who live in data all day, their main focus is simply the best tool at hand to do their specific job.

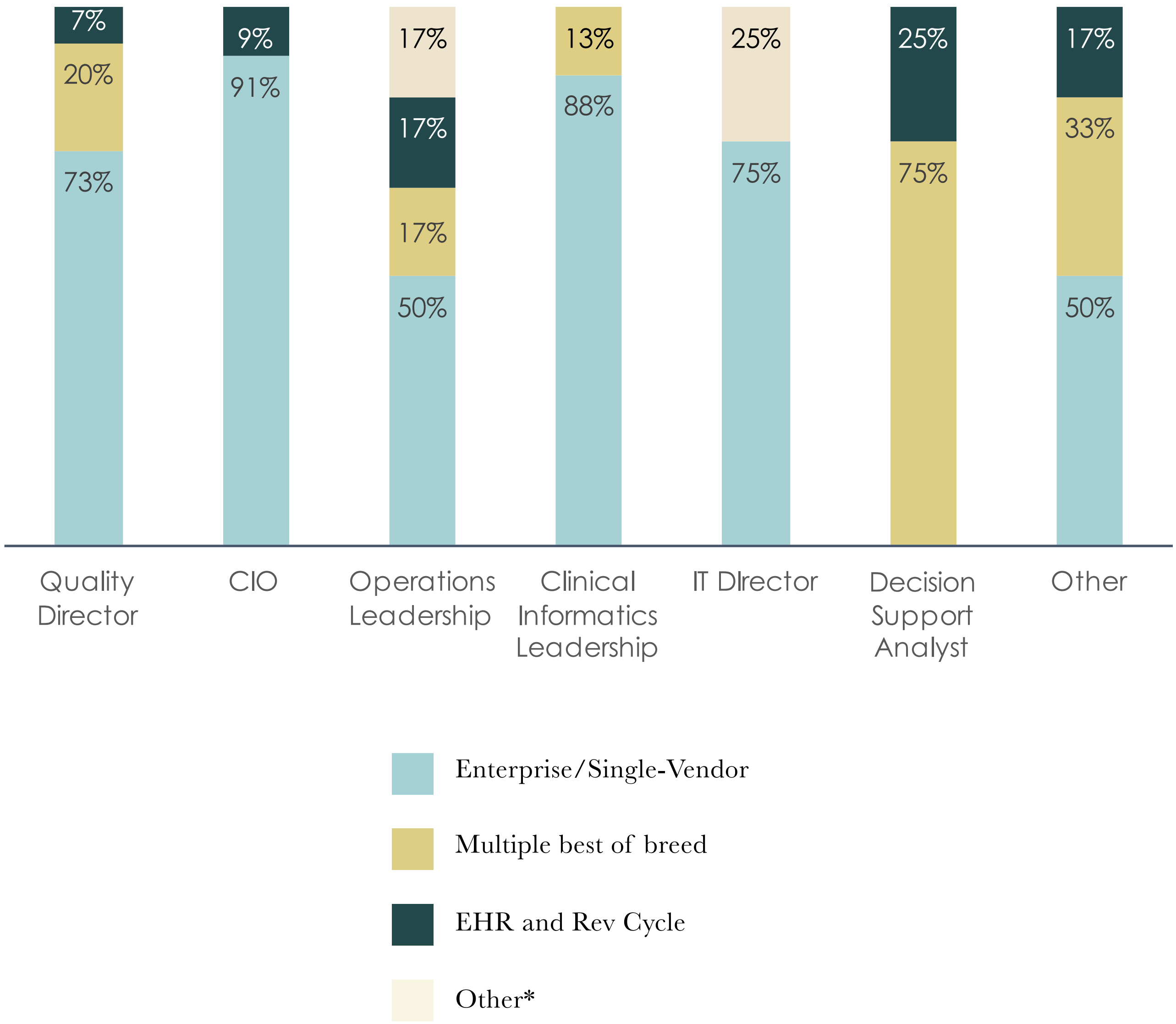
Perception of the Most Ideal Data Analytics Configuration (According to Participants with Multiple Solutions)



*Other: Big data lakes, combination of all options

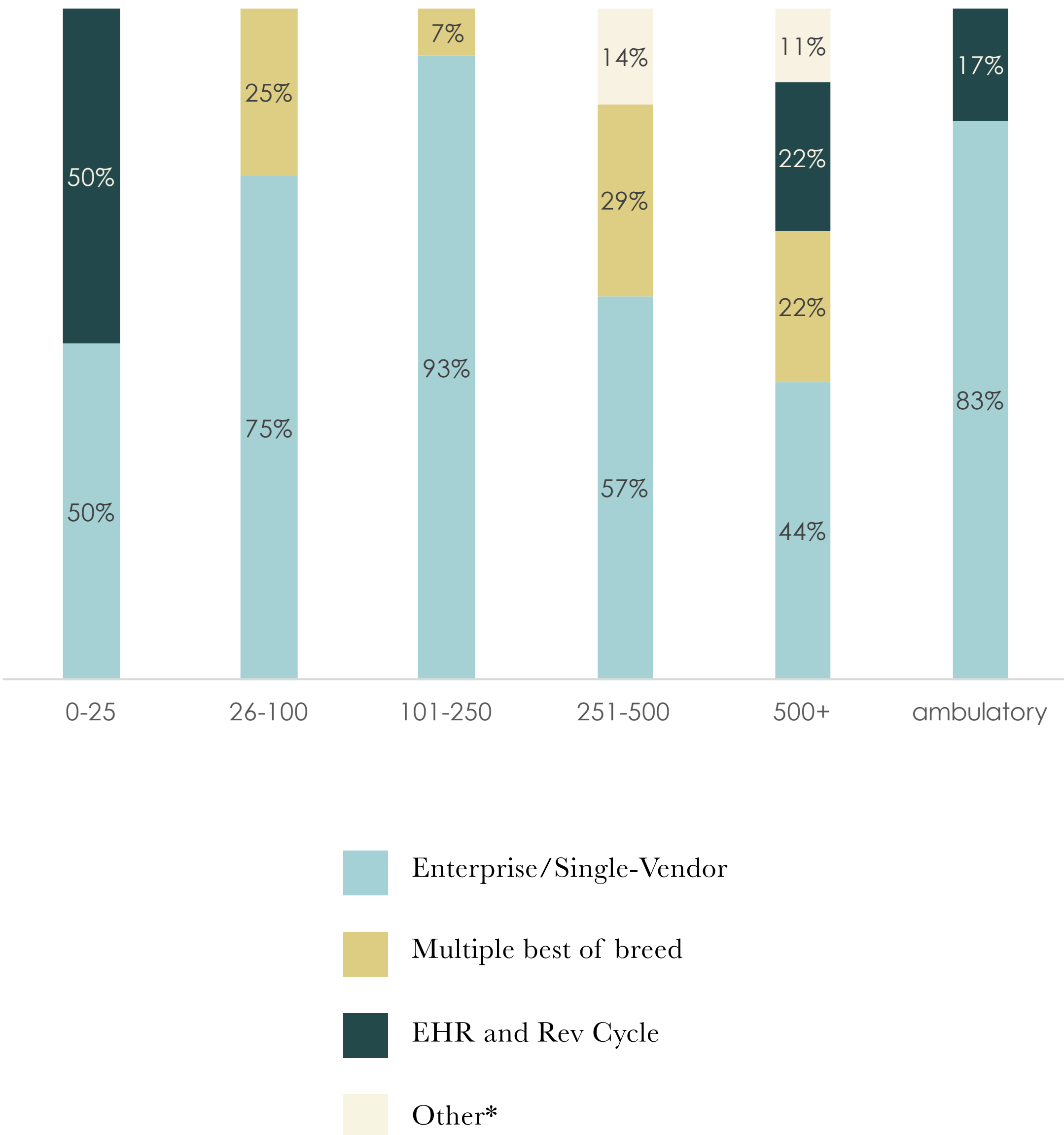
Ideal Analytics Situation

Perception of Most Ideal Data Analytics Configuration (by Title)



Ideal Analytics Situation

Perception of Most Ideal Data Analytics Configuration (by Organization Size)

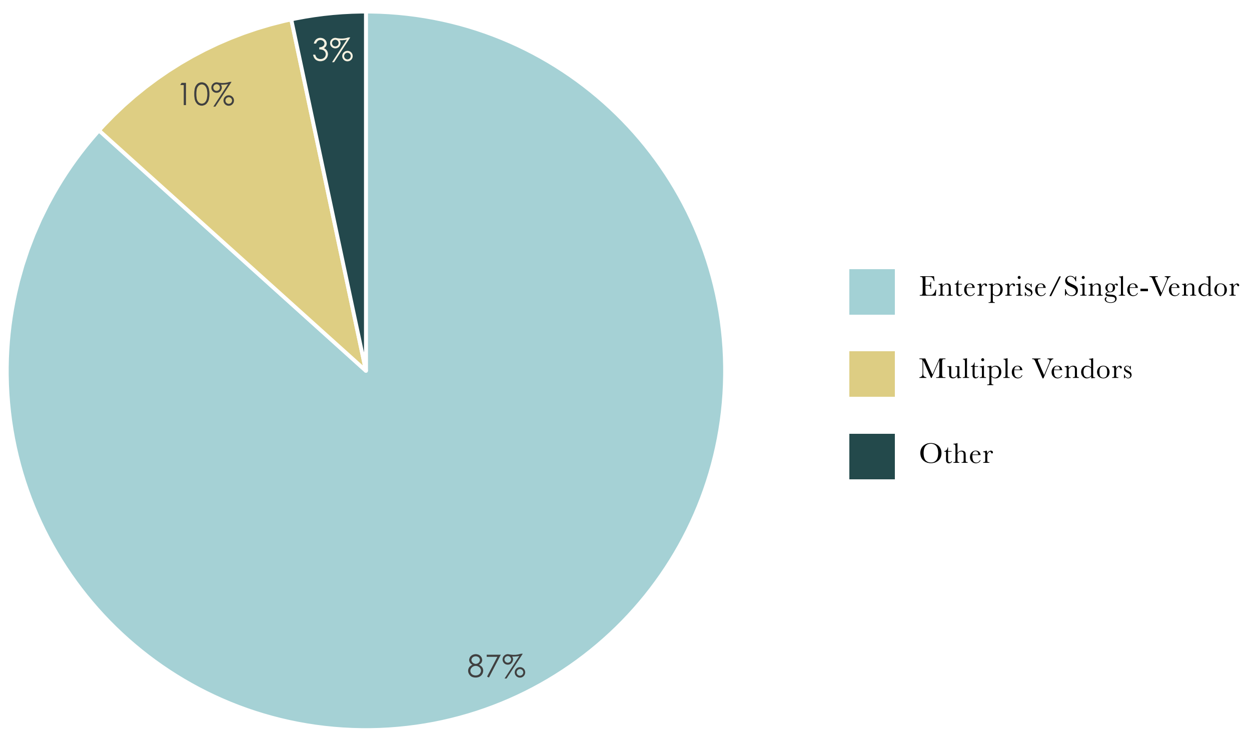


Ideal Analytics Situation

Providers with Enterprise Analytics

Not surprisingly, providers using an enterprise analytics platform are particularly in favor of that approach. While title seems to impact this view a little, which EHR supplier and revenue cycle management supplier they have does not.

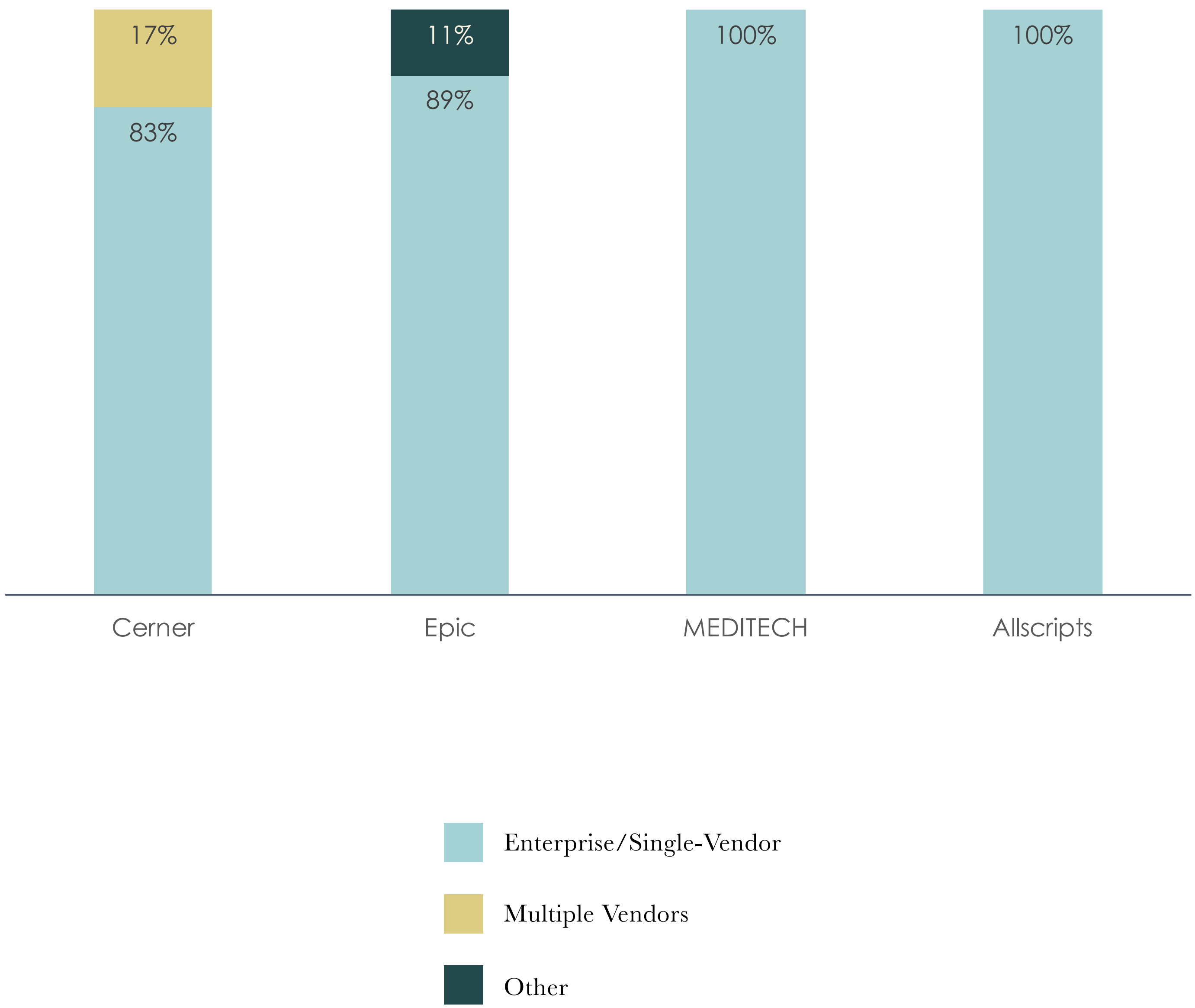
Perception of Most Ideal Data Analytics Configuration (Participants with Enterprise Analytics Solutions)



*Other: A single EDW with multiple BI/data visualizations tools, complement with EHR DW for quick-to- market analytics solutions delivered by vendor.

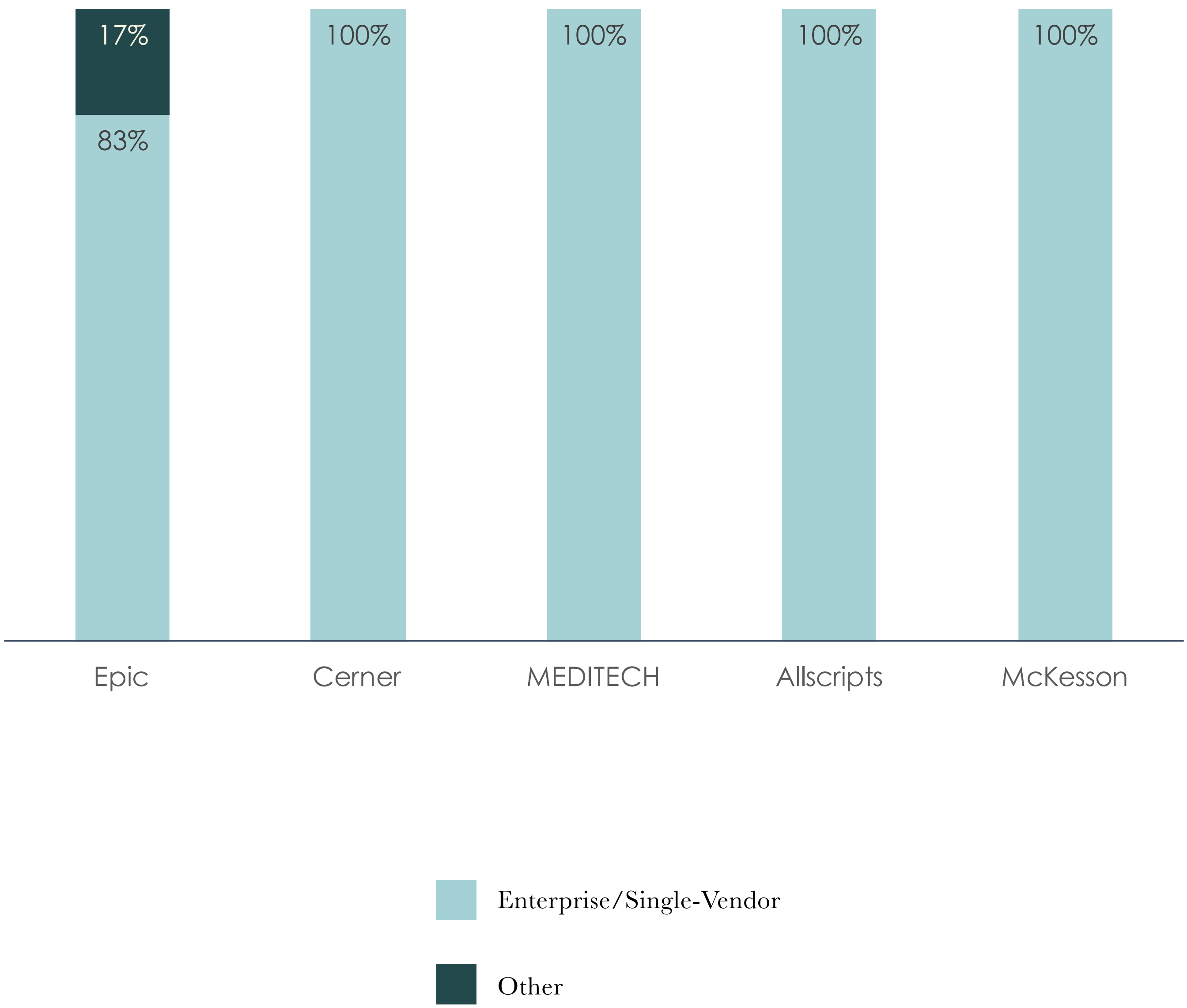
Ideal Analytics Situation

Perception of Most Ideal Data Analytics Configuration (by EHR Supplier)



Ideal Analytics Situation

Perception of Most Ideal Data Analytics Configuration (by Rev Cycle Supplier)

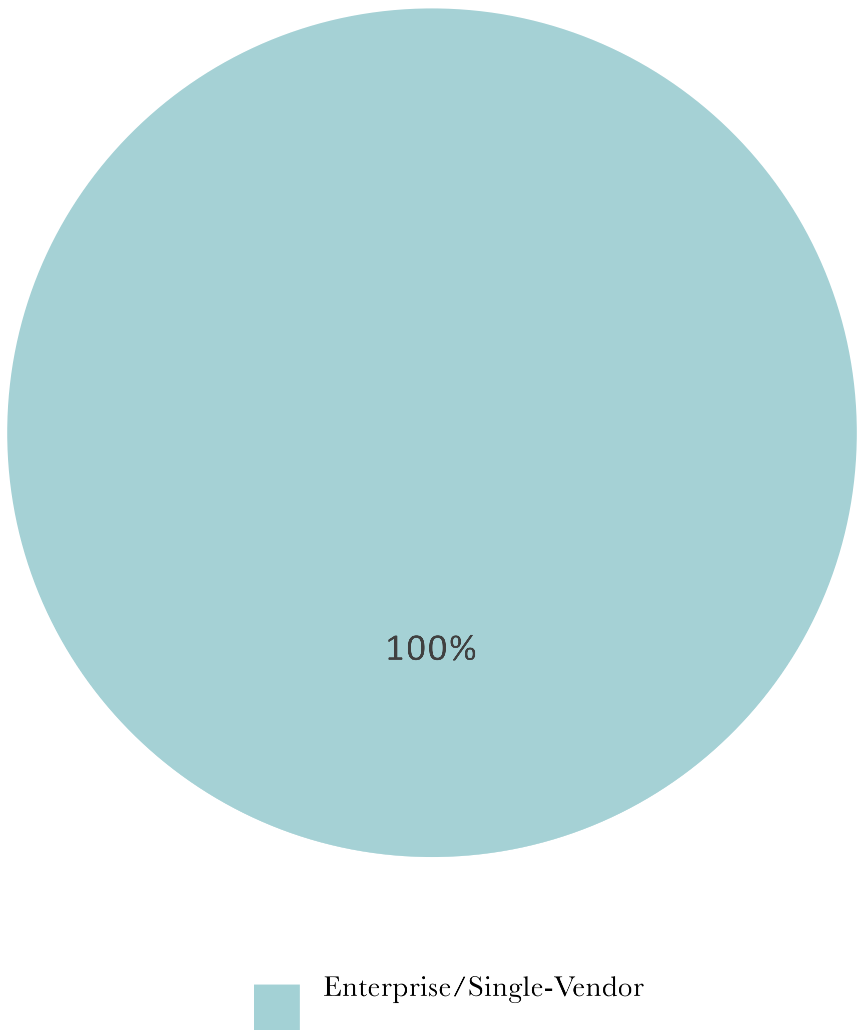


Ideal Analytics Situation

Providers with Homegrown or No Solution on Ideal Platform

Participants with homegrown solutions were unanimous in their belief that a single vendor configuration is best, as this admittedly silly-looking chart shows...

Participant with Homegrown Solution Views on the Most Ideal Analytics Configuration



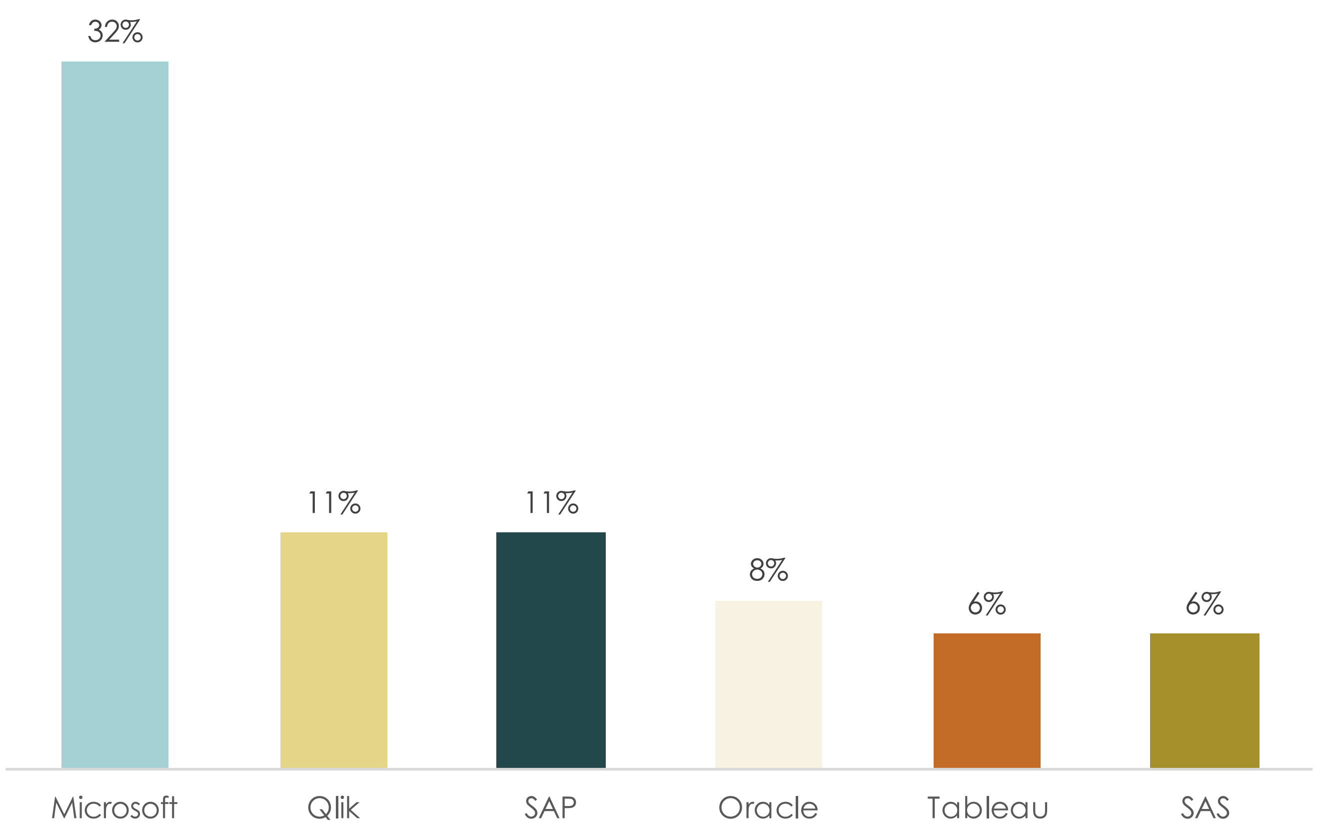
Data Visualization Suppliers

We've dipped our toes into the pool, and now it is time to dive in and look at the specific breakouts in the data analytics market. First up: The world of data visualization (dashboard) suppliers. Most of these companies aren't necessarily healthcare specific, but they have significant usage within healthcare.

Data Visualization Market

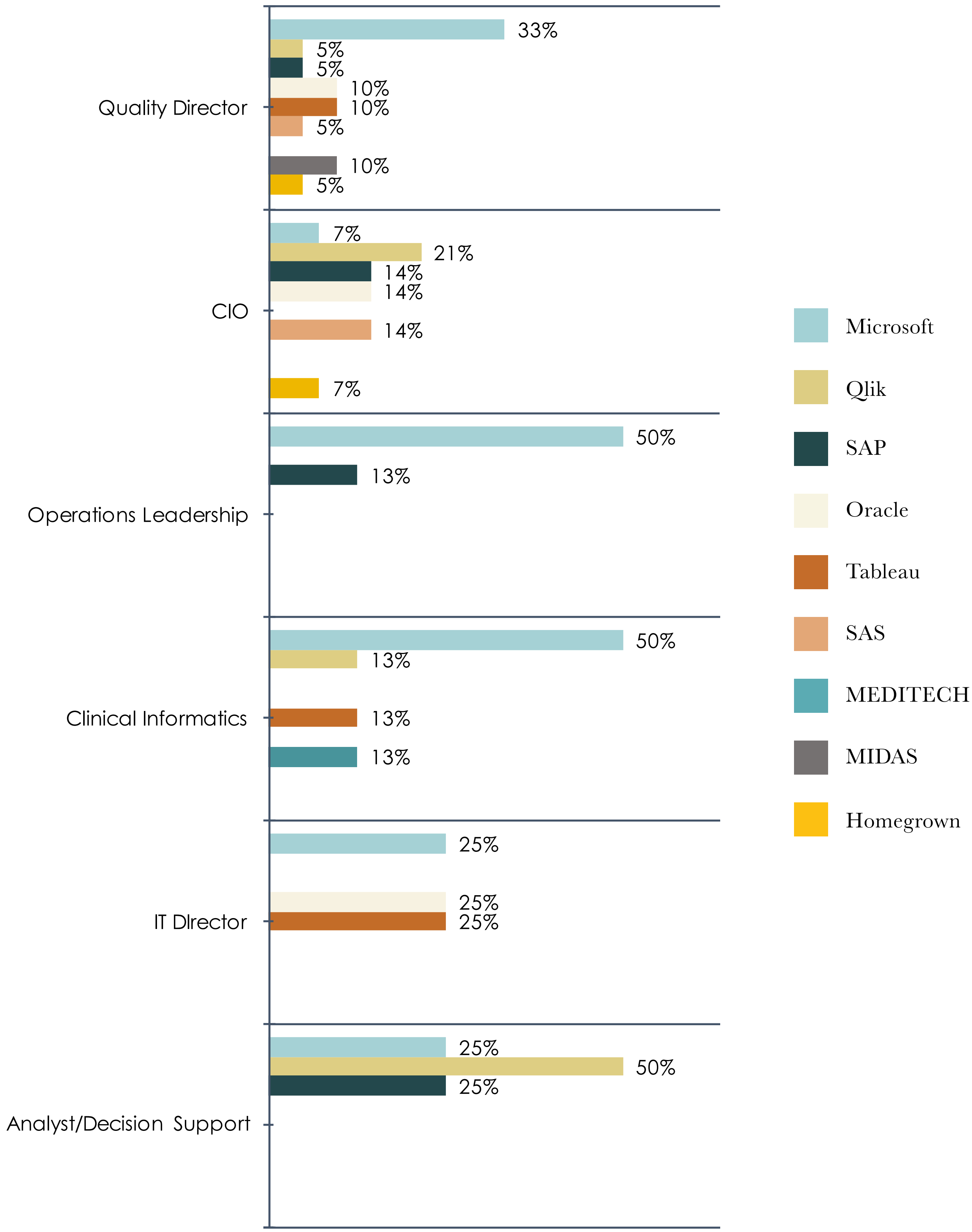
Clearly, Microsoft leads overall market share in data visualization, with its dominance being focused heavily on Quality Directors, Operations Leaders, and Clinical Informaticists. Other solutions have their niches and do well with different provider personnel. In addition, some suppliers do better or worse depending upon the EHR supplier a provider uses, suggesting that some suppliers have functionality that better matches certain EHR systems and environments.

Primary Data Visualization Supplier



Data Visualization Suppliers

Primary Data Visualization Supplier (by Title)



Data Visualization Suppliers

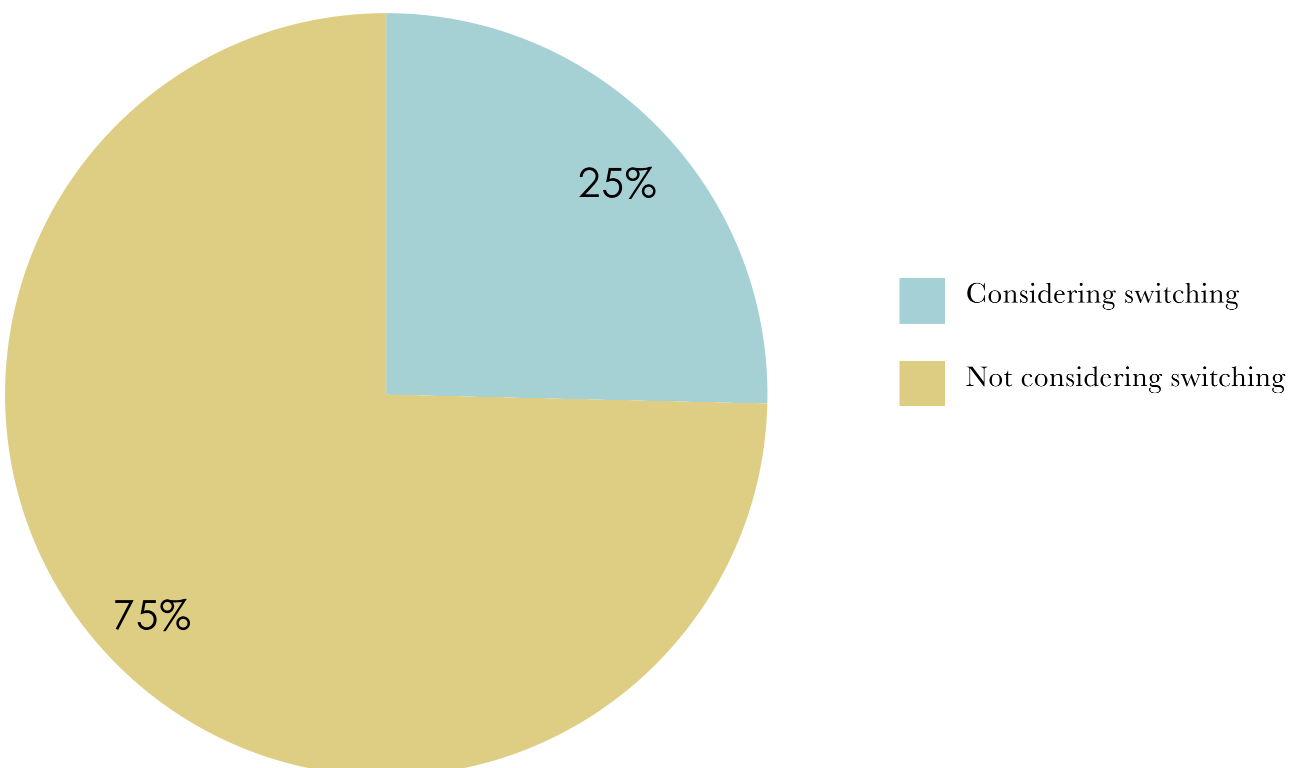
Data Visualization Purchases

Once you know customer satisfaction numbers, the size of the replacement market is not a surprise. Fully one quarter of the market is seriously considering kicking out their current supplier in favor of a different one. For healthcare IT, that's a pretty big number and it points to a big shift in market share over the next 2 years.

Presently, Tableau is the clear leader in mindshare for this replacement market. Oracle, IBM, and Microsoft all tie for second with solid mindshare as well. Oracle is the supplier in most danger of being replaced. SAP and SAS are also facing the potential loss of a significant number of customers.

Tableau, Qlik, Sisense, and Viewics are each fighting for mindshare among first-time adopters of data visualization. The market opportunity for net new business is small, but they are each being considered by half of the relevant participants in this study.

Data Visualization Replacement Market



Data Warehouse Suppliers

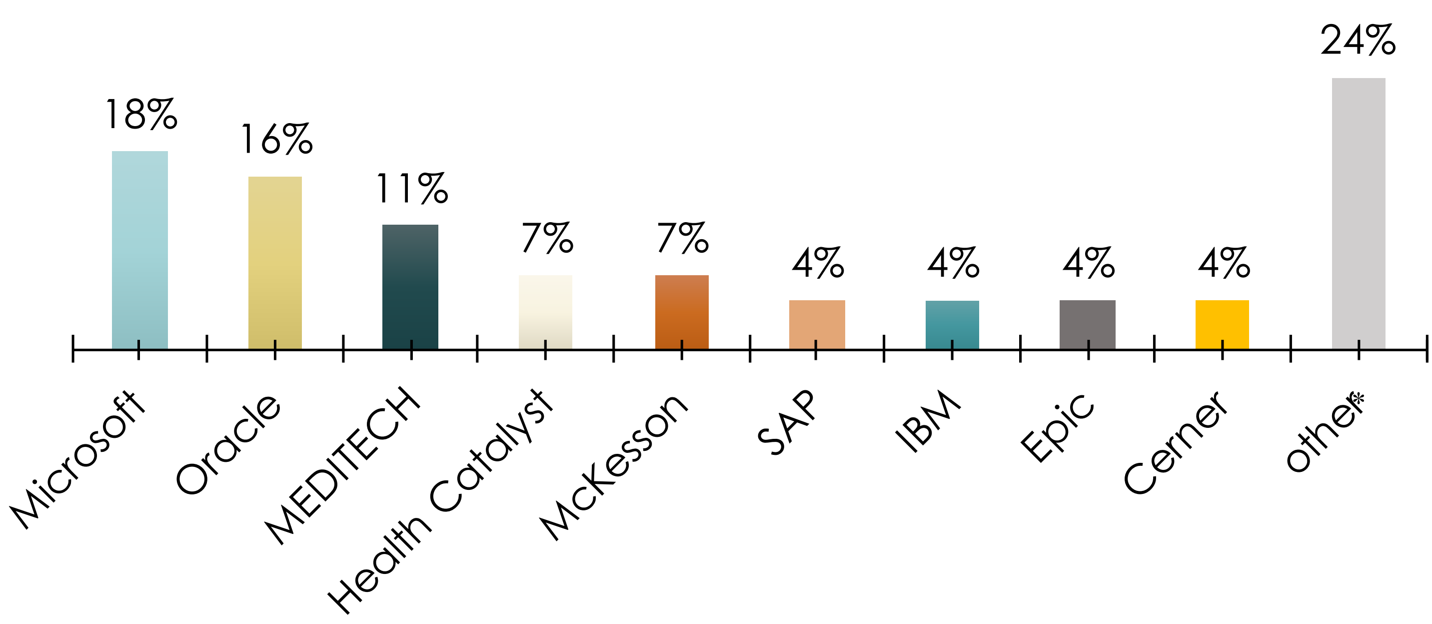
Data warehousing is a much bigger issue than many people realize. Storing, protecting, and maintaining the sheer volume of data held by a healthcare provider is a huge task to say nothing about storing the data in such a way as to make it as easy as possible to mine with precision. This section explores these data warehouse solutions.

Note to Reader: Different provider organizations define data warehouses very differently than do others. Some have utilized robust third-party data warehouse solutions, while others have simply expanded the current data repository underlying their EHR and RCM systems and call that a data warehouse. While our definition aligns with the traditional "high-tech" definition of what a real data warehouse is, we left it up to the participants to define what a data warehouse is to them. Astute readers of this section will be able to see the differences between the two with ease. Stated another way, we aren't trying to define or build a market, we're just here to report on it. In addition, just for information's sake, InterSystems Cache is a key database used as the foundation for Epic and Meditech's EHR and RCM solutions.

Data Warehouse Market

The data warehouse market has no truly dominant player, though tech titans Microsoft and Oracle have the largest market share (which shouldn't be overly surprising since Microsoft and Oracle are typically the data warehouse leaders in almost every industry). The data warehouse chosen appears to vary depending upon the EHR and revenue cycle management (RCM) solution used (which also makes sense since many of the data repositories of EHR and RCM are built upon the foundations of many software firms that also offer data warehouses).

Primary Data Warehouse



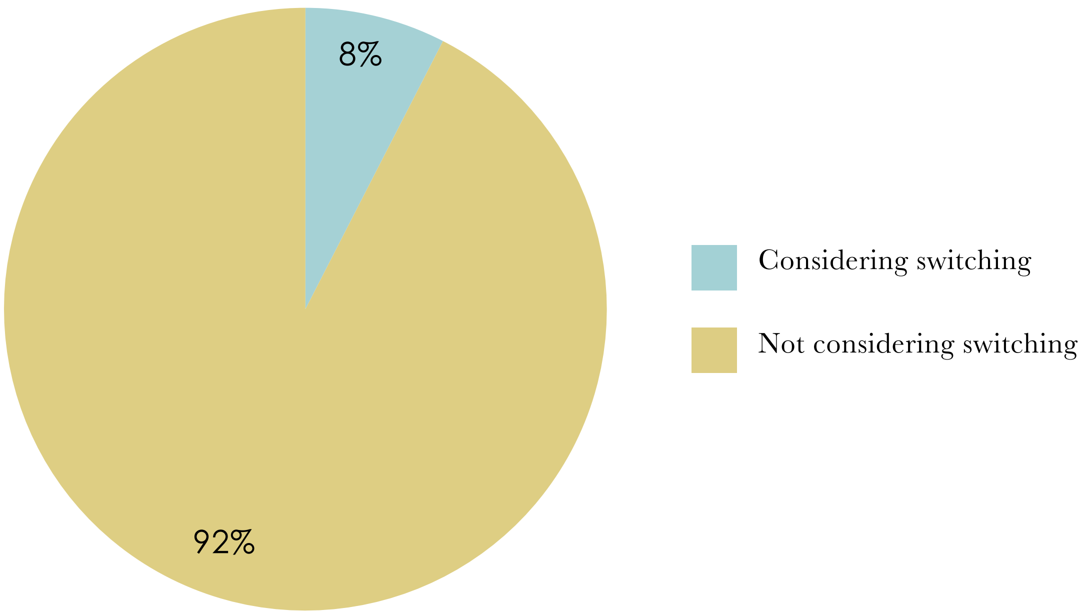
*Other includes: Advisory Board, Allscripts, Brightree, Evident, Merge, Qlikview, SAS

Data Warehouse Suppliers

Data Warehouse Purchases

The market for switching data warehouses is relatively modest (8%), which reflects the sheer difficulty of switching such a massive and critical product; however it will not stay this way if such rampant dissatisfaction continues. For now, IBM, Health Catalyst, Cerner, and Qlik are each making a strong push in the space. This is in contrast to the small first-time adopter market where the key players are Microsoft, Oracle, and InterSystems.

Data Warehouse Replacement Market



Consulting Firms

While many feel that consulting firms are a superfluous aspect of healthcare, when it comes to the proper utilization of data, a good consultant is worth his/her weight in gold. Simply slapping in an incredibly robust and complex solution like data analytics and then expecting your hospital to just magically improve overnight just won't do the trick. In almost every case, the hospital's workflow (in all of its diversity and complexity), current IT systems, historical benchmarks, current financial and operational status, future goals, etc., all must be analyzed with programs and strategies built and put in place in concert with an analytics strategy. It's a major understatement to say that this isn't remotely easy to do and as such requires real expertise, best practices, and hand-holding to pull it off. And with that… let's dive into the world of consulting firms (that have a focus in analytics).

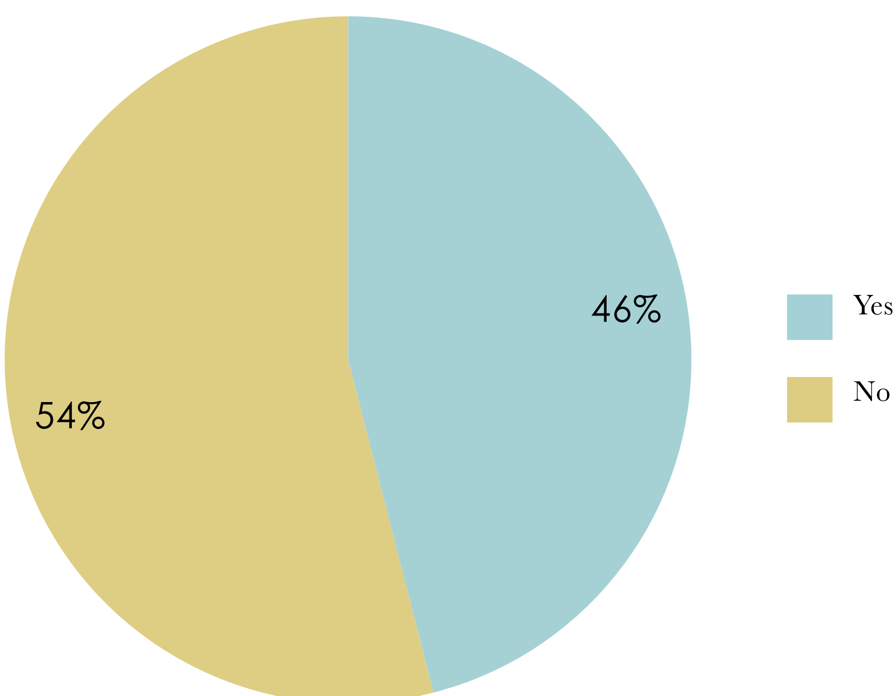
The Market for Consulting Assistance

Nearly half of healthcare providers in this study used consulting firms with an analytics practice. It is a big market, and the Advisory Board controls a commanding presence (38%). Many smaller firms come into play, though none to date have even 10% of the market. Simply put, there are many, many firms for hospitals to choose from.

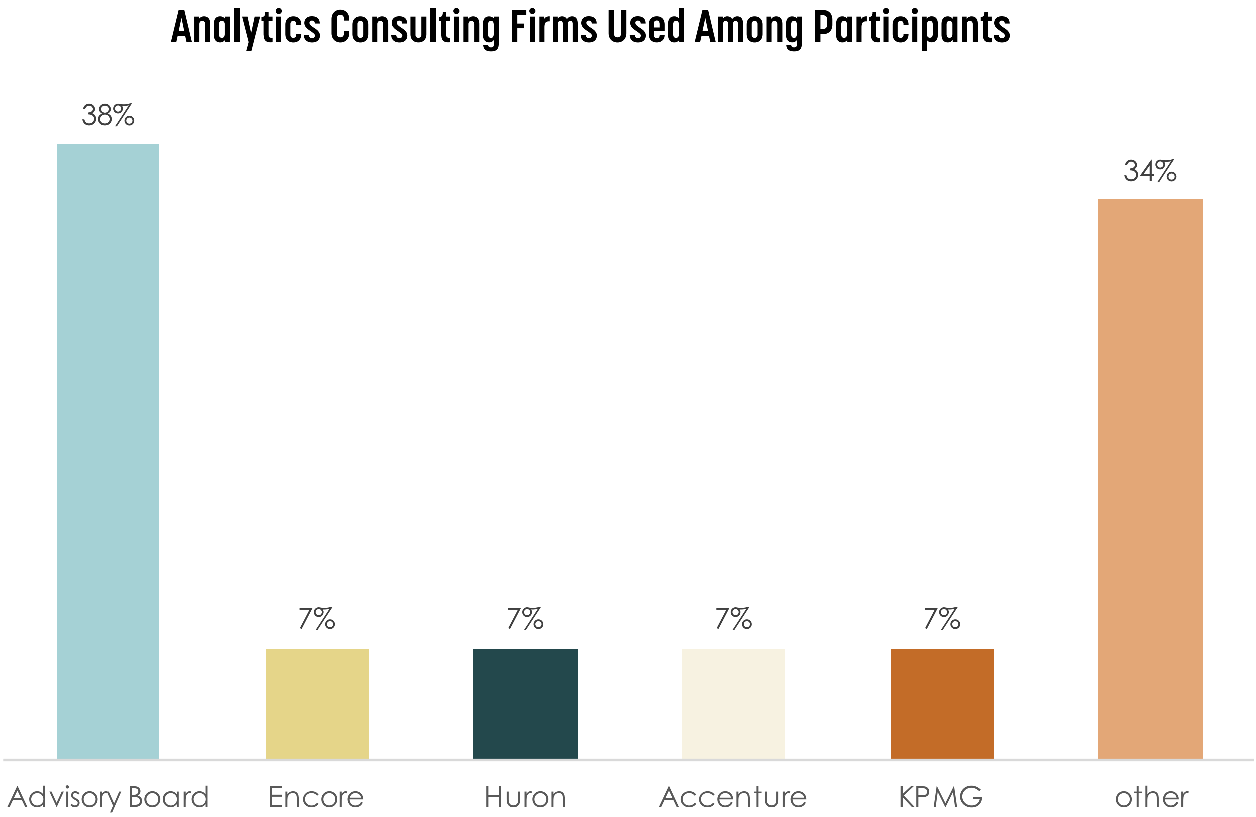
It's important to note that the EHR supplier a hospital has installed actually makes a definite impact on the consulting firm chosen to assist in its analytics programs. The Advisory Board appears to do better with some EHR suppliers than with others. While 40% of Allscripts customers use it, that number drops significantly with Cerner and MEDITECH. Is this because a disproportionate number of Allscripts customers also have Crimson* solutions and services? We're not sure and additional research is needed to ascertain whether or not this is the case.

*Crimson was acquired by Advisory Board in 2008 and has a large install base across provider organizations of all types.

Participants Using a Consulting Firm



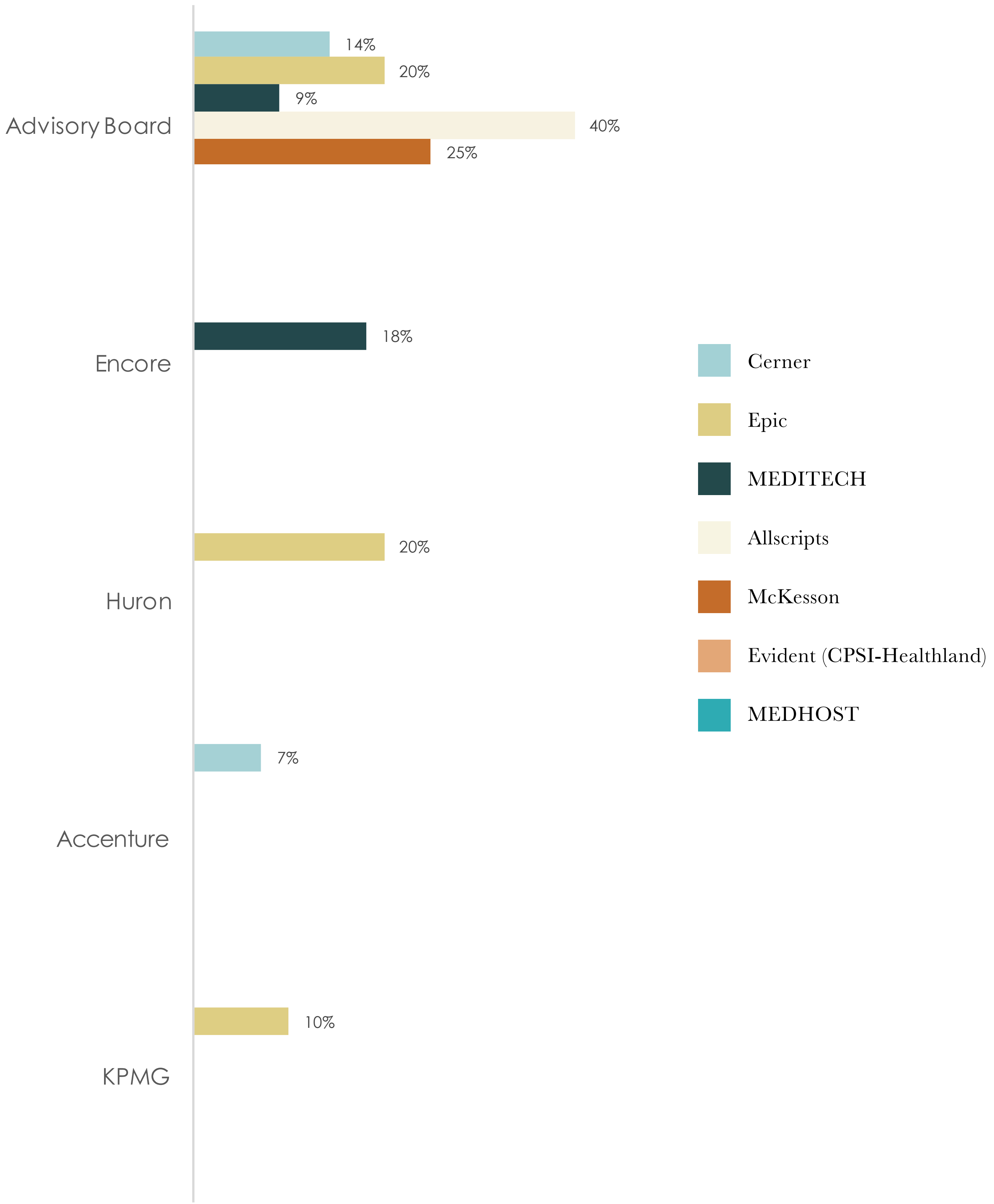
Consulting Firms



*Other: PwC, Physician Health, Eagle Dream, Iatrics, Nordic, IVantage, Preyra Solutions, ECG, Premier, AFMC

Consulting Firms

Consulting Firm (by EHR Supplier)



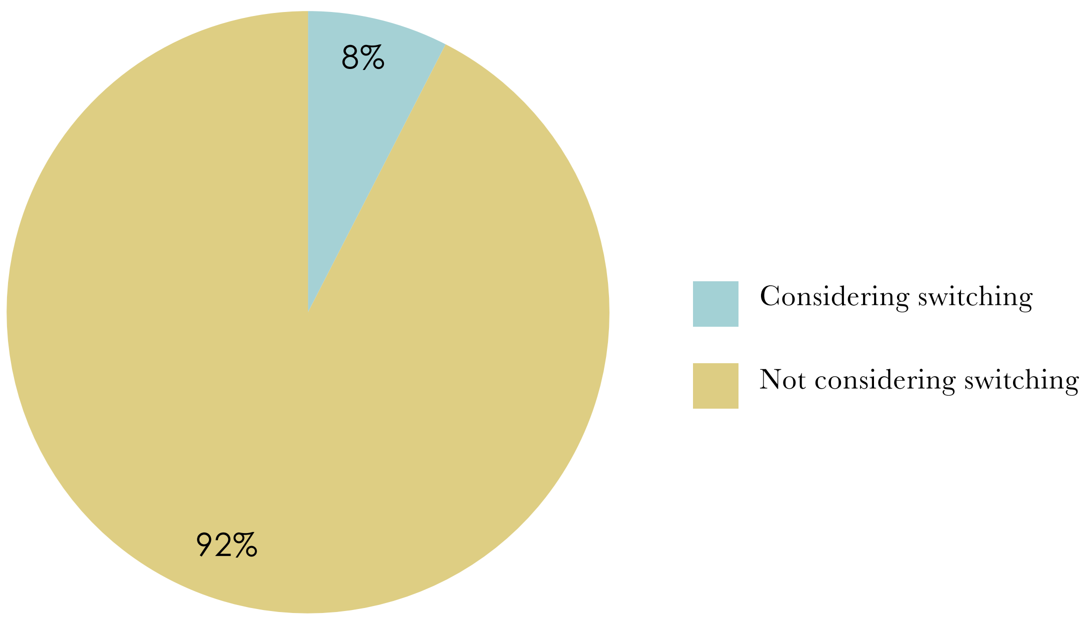
Consulting Firms

Switching Consulting Firms

Many hospitals find the need to rely on expertise from consulting firms on an ongoing basis -- especially when it comes to properly analyzing and utilizing data to continually improve outcomes. Yet some hospitals find that while they need ongoing guidance and help, they don't want it to necessarily come from the same firm; the concern with all consulting firms is that the results are only as good as the people working on the project. If critical subject matter expertise decides to jump ship to another firm, there is a real temptation (and justifiably so) to want to follow that expertise regardless of what new firm that person is with.

Even with that being the case, the replacement market (for lack of a better term) for consulting firms is fairly small (with only 8% of providers looking to change the firm they're getting their guidance from), and there are differences in prospective mindshare; Accenture leads the pack with Advisory Board, DHG, and Cerner standing to gain substantial market share as well. The market for net new consulting deals is small and is currently divided between the Advisory Board and Beacon Partners.

Replacement Market of Consulting Firms

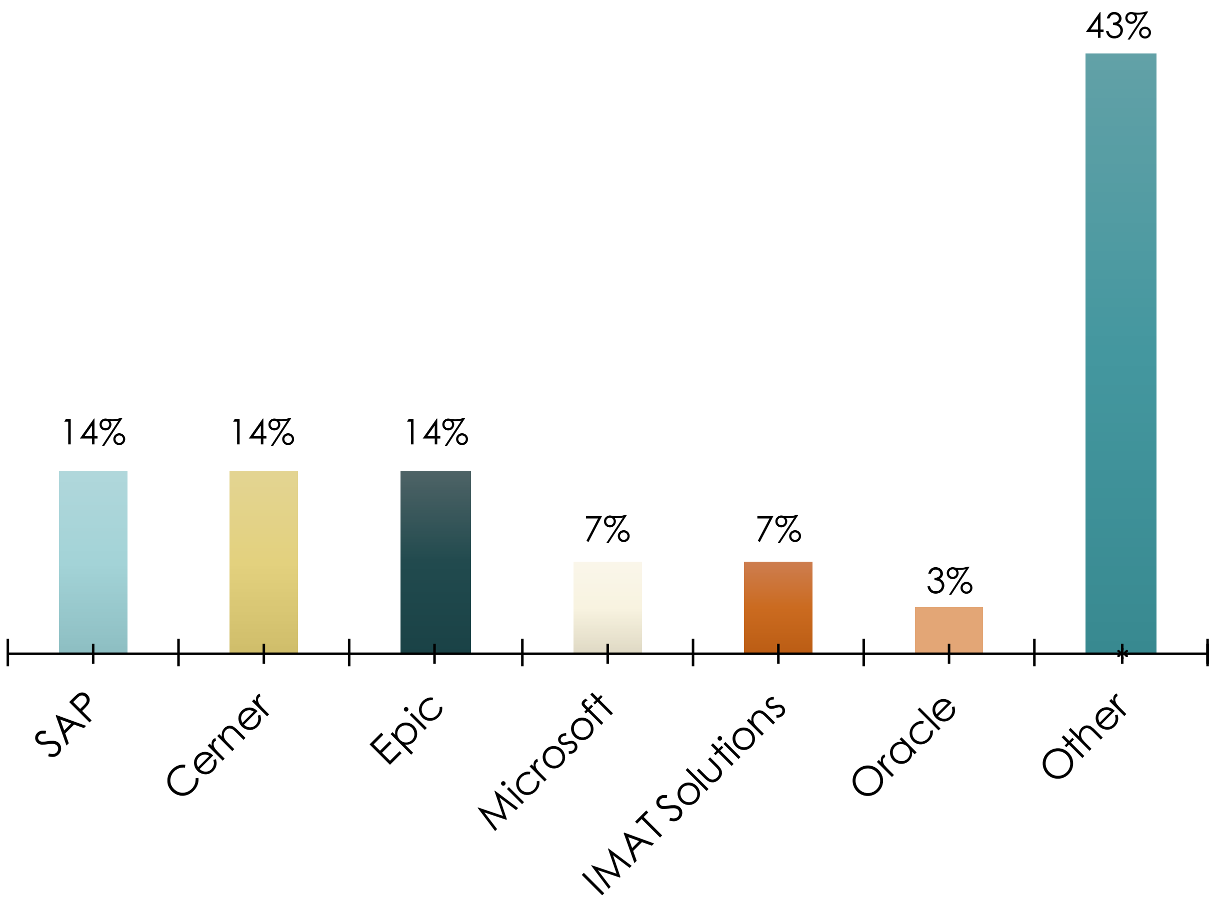


Enterprise Analytics

Can one vendor really handle the majority of a healthcare organization's data analytics needs? Enterprise analytics vendors certainly think so -- and they have the hearts of many hospital leaders. For the purpose of this research, participants defined enterprise analytics as one vendor supplying dashboards (visualization), a data warehouse, and in some cases even consulting services as well. As shown earlier in this report, the size and scope of turning a hospital around (or helping it move forward) is very much dependent on a true data analytics strategy and program, and the results point to a single-vendor approach. We'll see, but one thing is certain -- big data is BIG money. Someone is going to get very rich…

(Yet another) Note to Reader: Provider organizations define "enterprise analytics" very differently from one another. Some feel that a simple combination of their EHR vendor's CDR (clinical data repository) and the basic, white-labeled dashboard their EHR vendor sold them, constitutes a true single-vendor enterprise approach to analytics; others raise the bar quite a bit higher and demand a true robust enterprise data warehouse with advanced analytics reporting dashboards and workflows. While we would love to present a true apples-to-apples comparison where everyone's definitions are identical, that isn't possible -- it simply does not reflect the veritable fruit basket that is healthcare. Healthcare is definitely a screwy, dysfunctional family, but we still love being a part of it nonetheless. Again, the purpose of this report is to reflect the state of the market, not to try and evangelize the strategy we think is best.

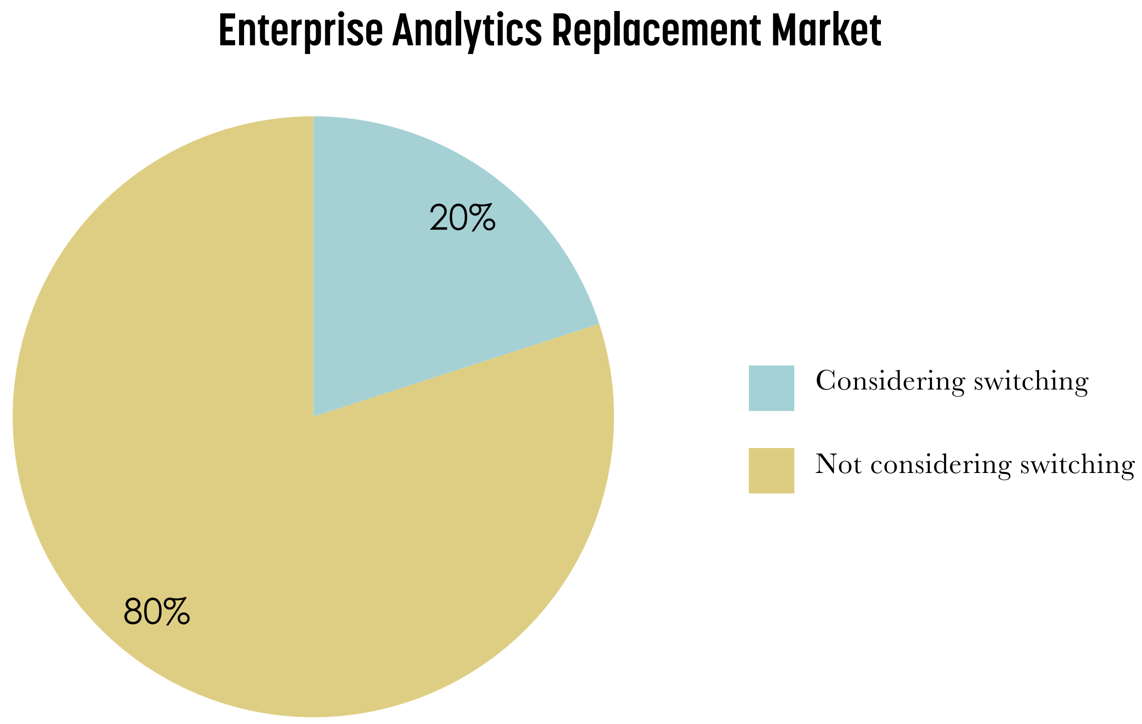
Enterprise Analytics Suppliers Among Participants



*Other includes: Advisory Board, Arcadia Healthcare Solutions, Arrowlytics, Care Evolution, Coeus BI, HC1, Health Catalyst, IBM, McKesson, Microstrategy, NextGen, NTT.

Enterprise Analytics Replacement Market

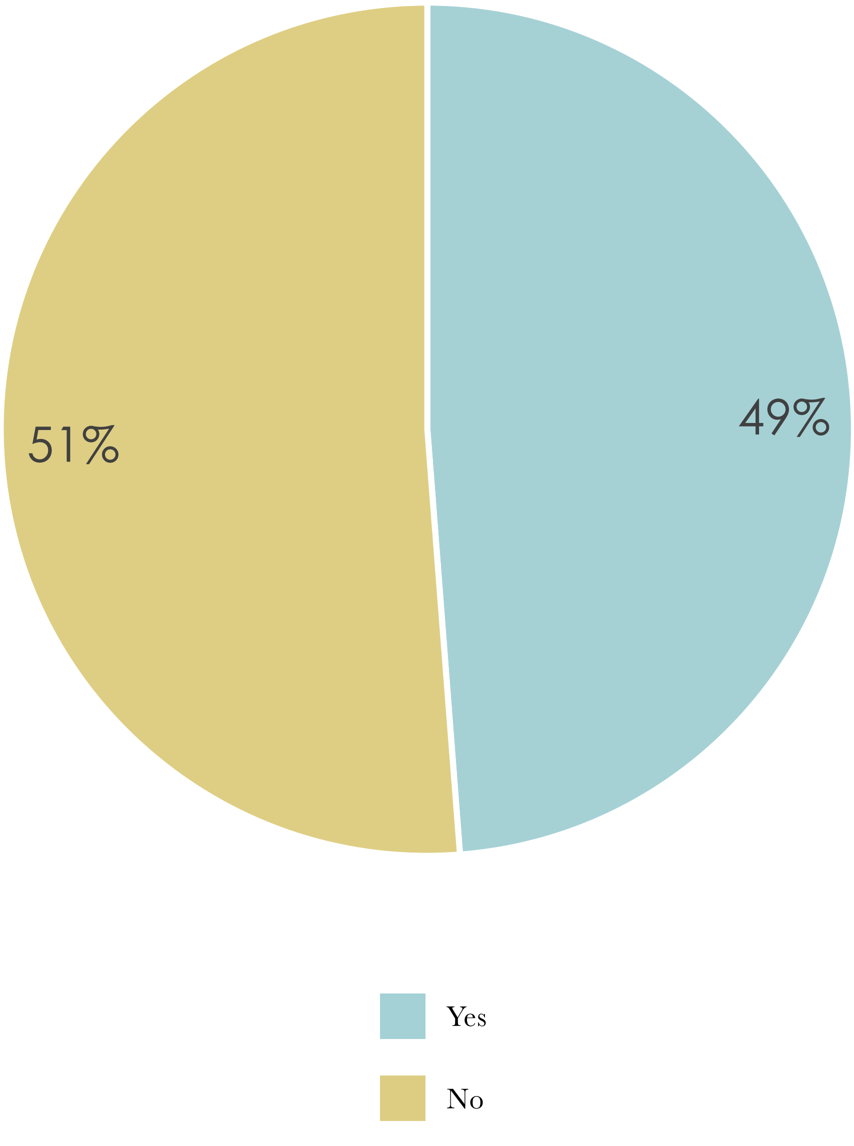
Even though the enterprise analytics market is still emerging, the replacement market is already heating up in a big way with 20% of participants stating they are actively looking for a new offering. No individual vendor appears primed to snap up serious market share as of yet. Instead, Cerner, Microsoft, IMAT, Intersystems, and Premier are each claiming a small chunk of the mindshare.



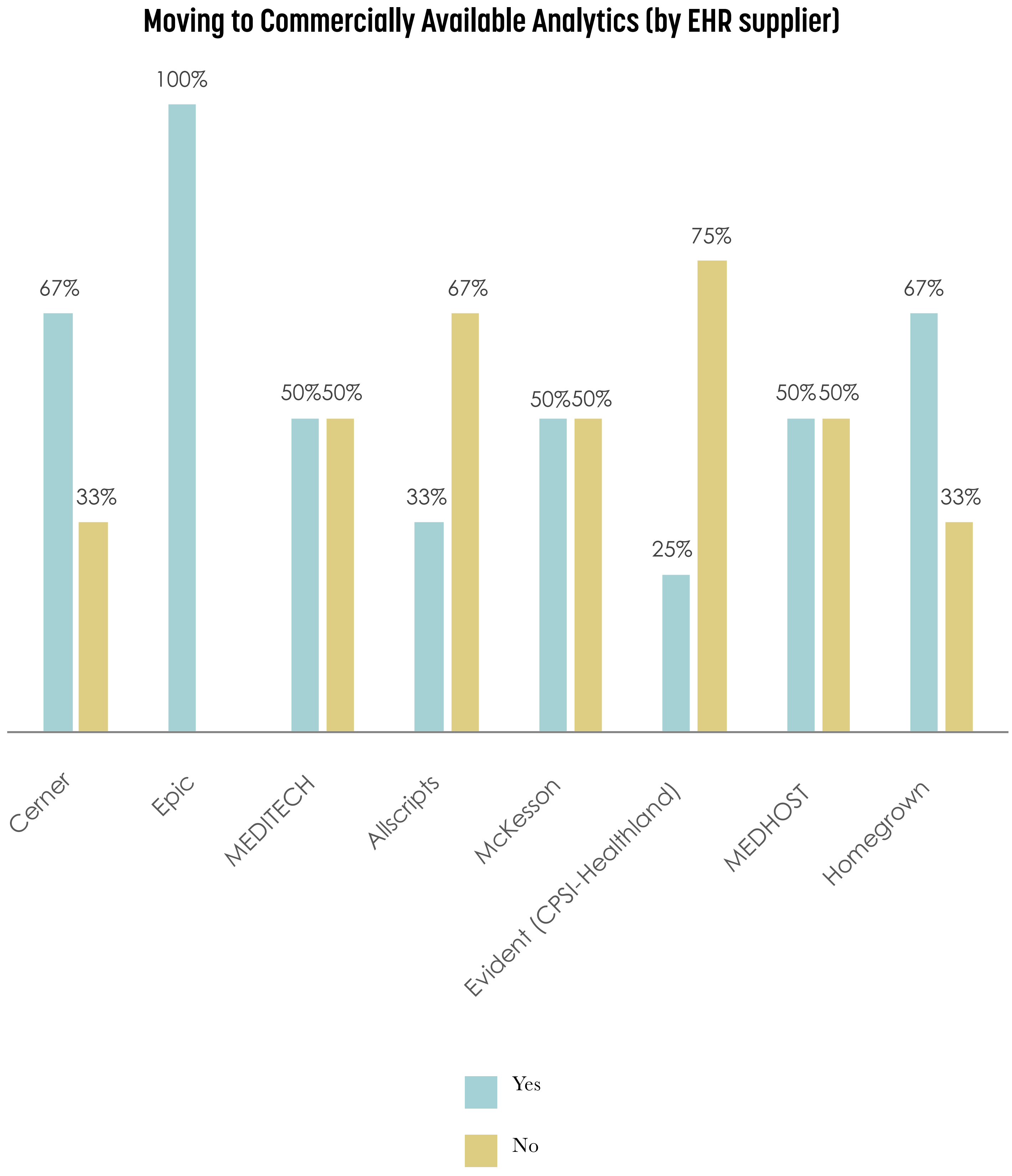
The Homegrown Analytics Market

Only in the last decade have truly robust analytics solutions become available (owing in large part to the digitization of analog patient charts inherent in the mandate to adopt an EHR). A sizable portion of providers simply couldn't wait around for robust analytics to come into their own so they developed their own homegrown analytics strategies; this amounted to cobbling together solutions they developed with software tools found in the market and then marrying that with their EHR and RCM systems. These hospitals definitely are data pioneers and have paved the way for a more robust future for analytics. While half of these data pioneers are still comfortable with their homegrown approach, the other half see a need to change and adopt commercially available solutions. We wish both camps all the luck in the world.

Will you move from homegrown to commercially available data analytics solutions?

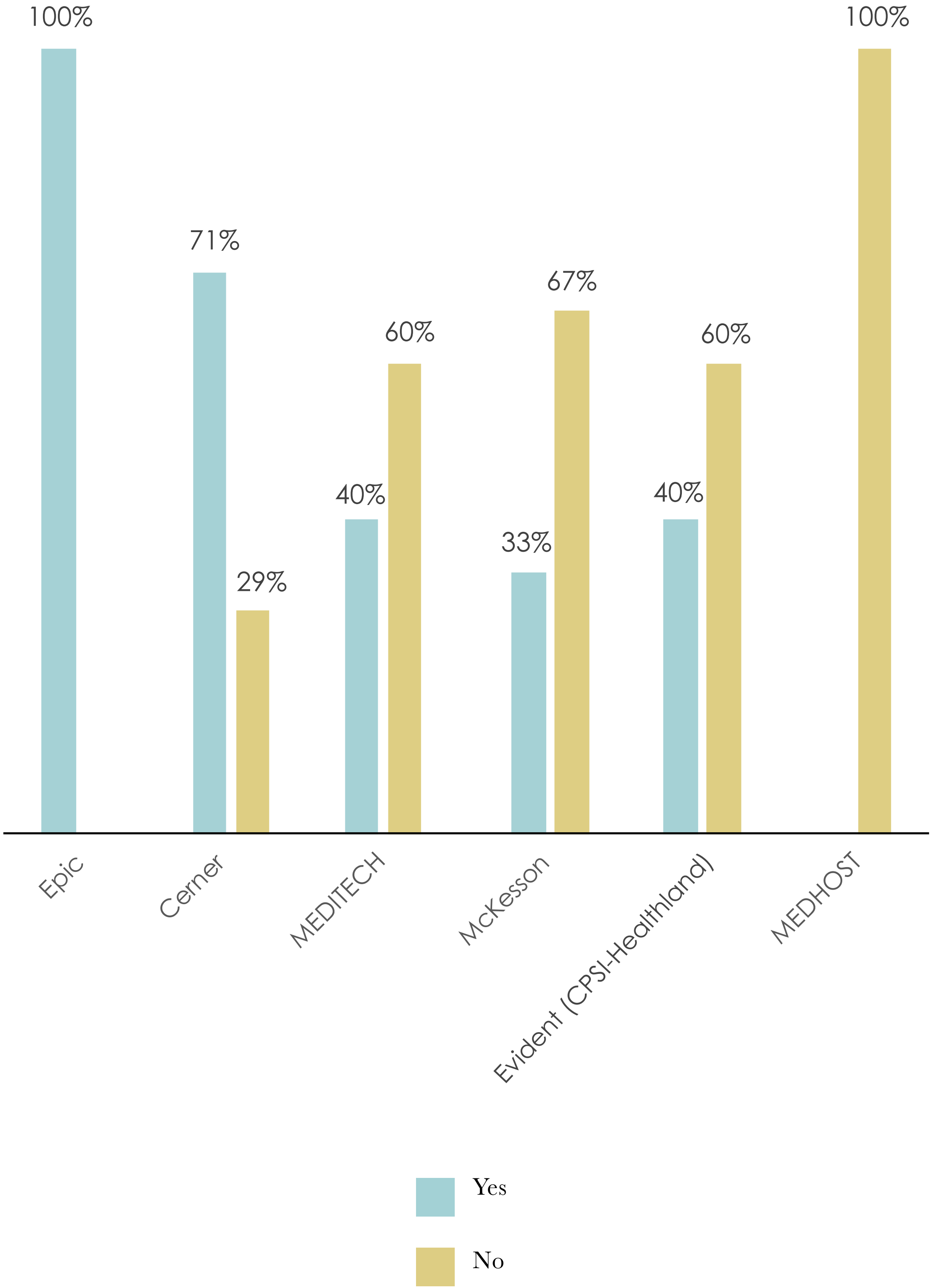


The Homegrown Analytics Market

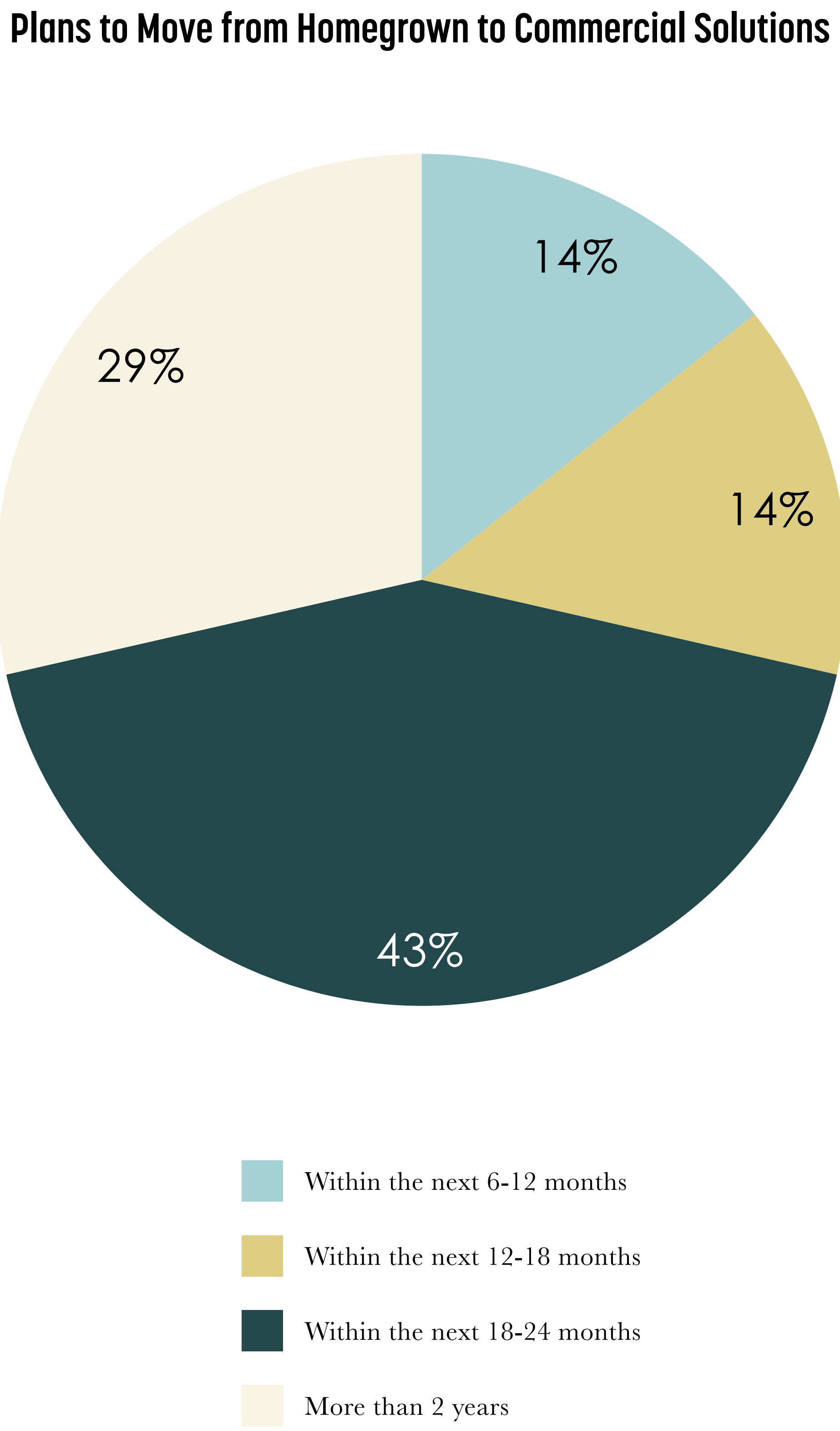


The Homegrown Analytics Market

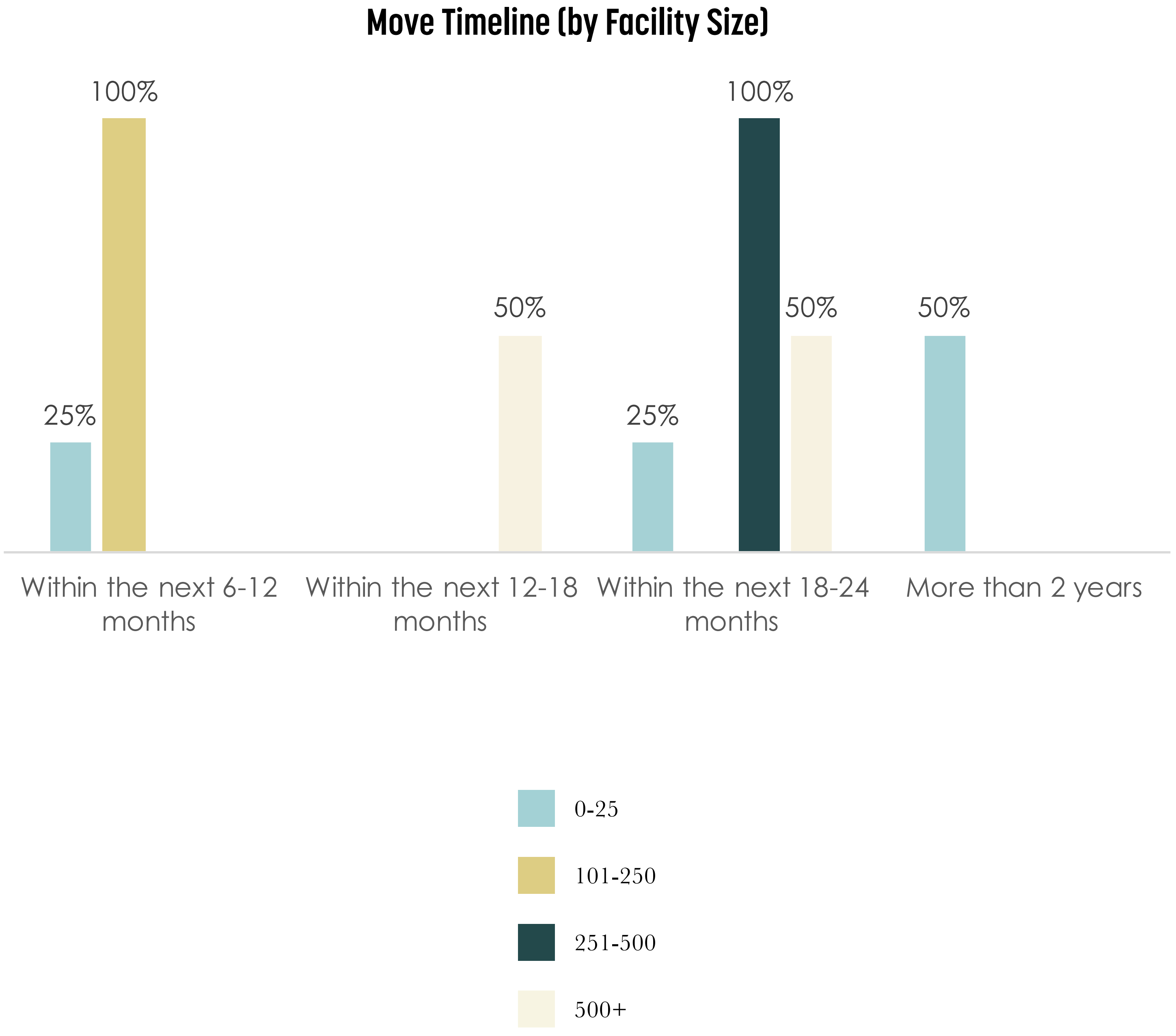
Moving to Commercially Available Analytics (by Rev Cycle Supplier)



The Homegrown Analytics Market



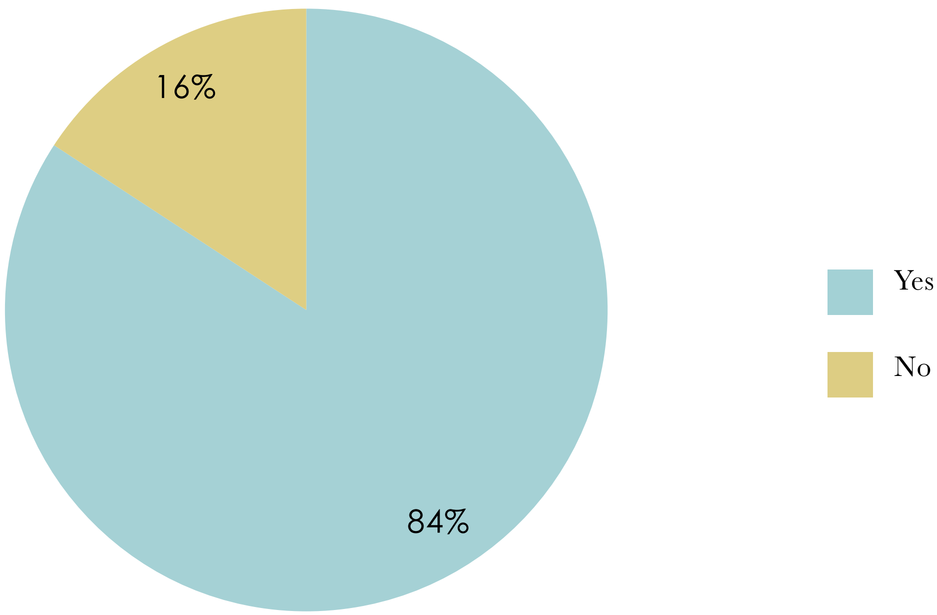
The Homegrown Analytics Market



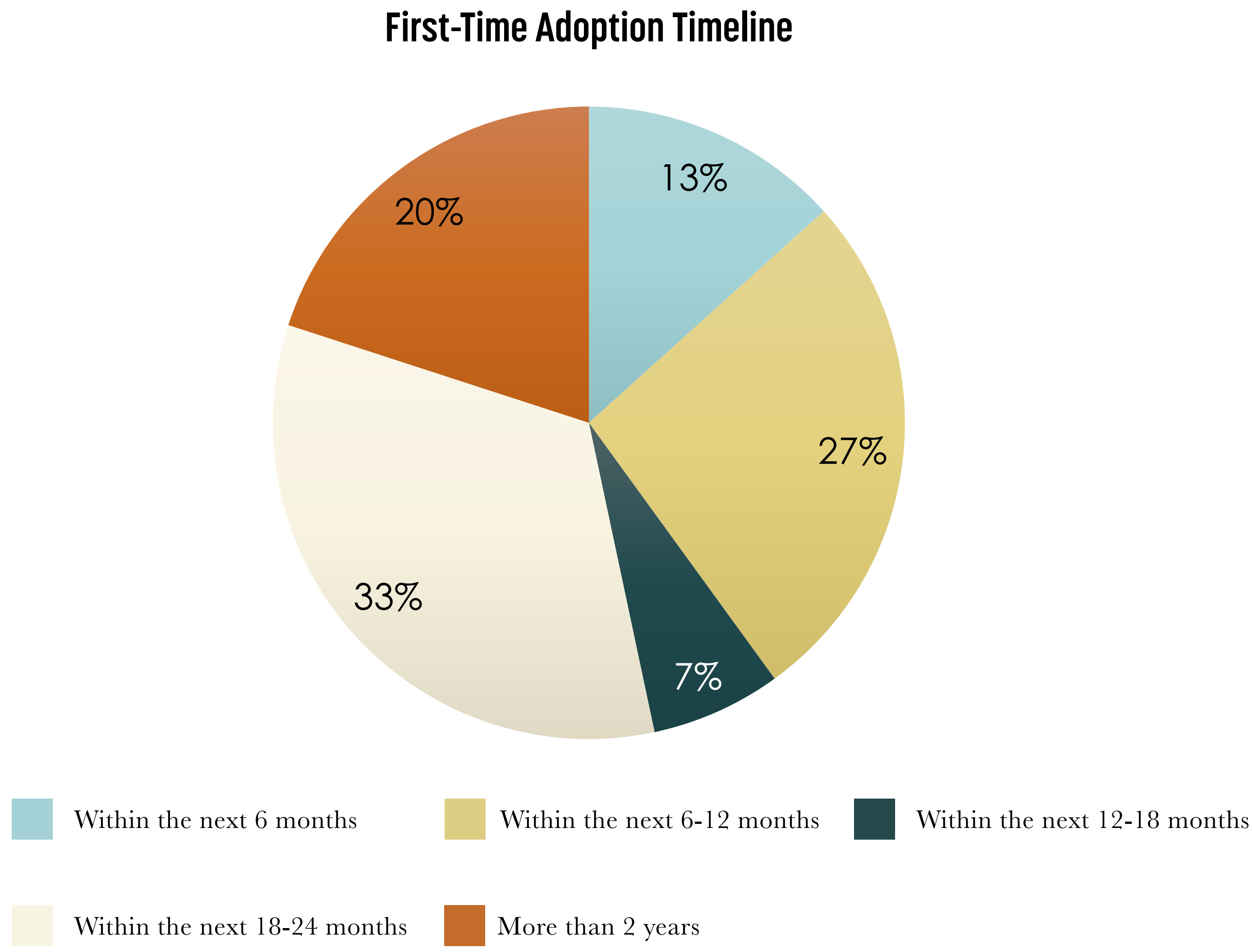
Providers with No Analytics Solutions

The last remaining holdouts without any analytics solution whatsoever are beginning to see the light. This is a good thing -- trying to move forward in today's complex world of increased compliance, regulations, lawsuits, data breaches, and outcomes mandates (stick and carrot) without analytics would be nearly impossible. That's why it's not surprising in the least to see that the vast majority (84%) have plans to make a purchase and 80% of the majority will do so within the next two years. These numbers suggest the moves are more concrete than those from homegrown solutions. This specific demographic in the market should be the focus of consulting firms — these provider organizations will definitely need more guidance than most.

Plans to Adopt Commercially Available Solutions (Participants with No Analytics Solutions)



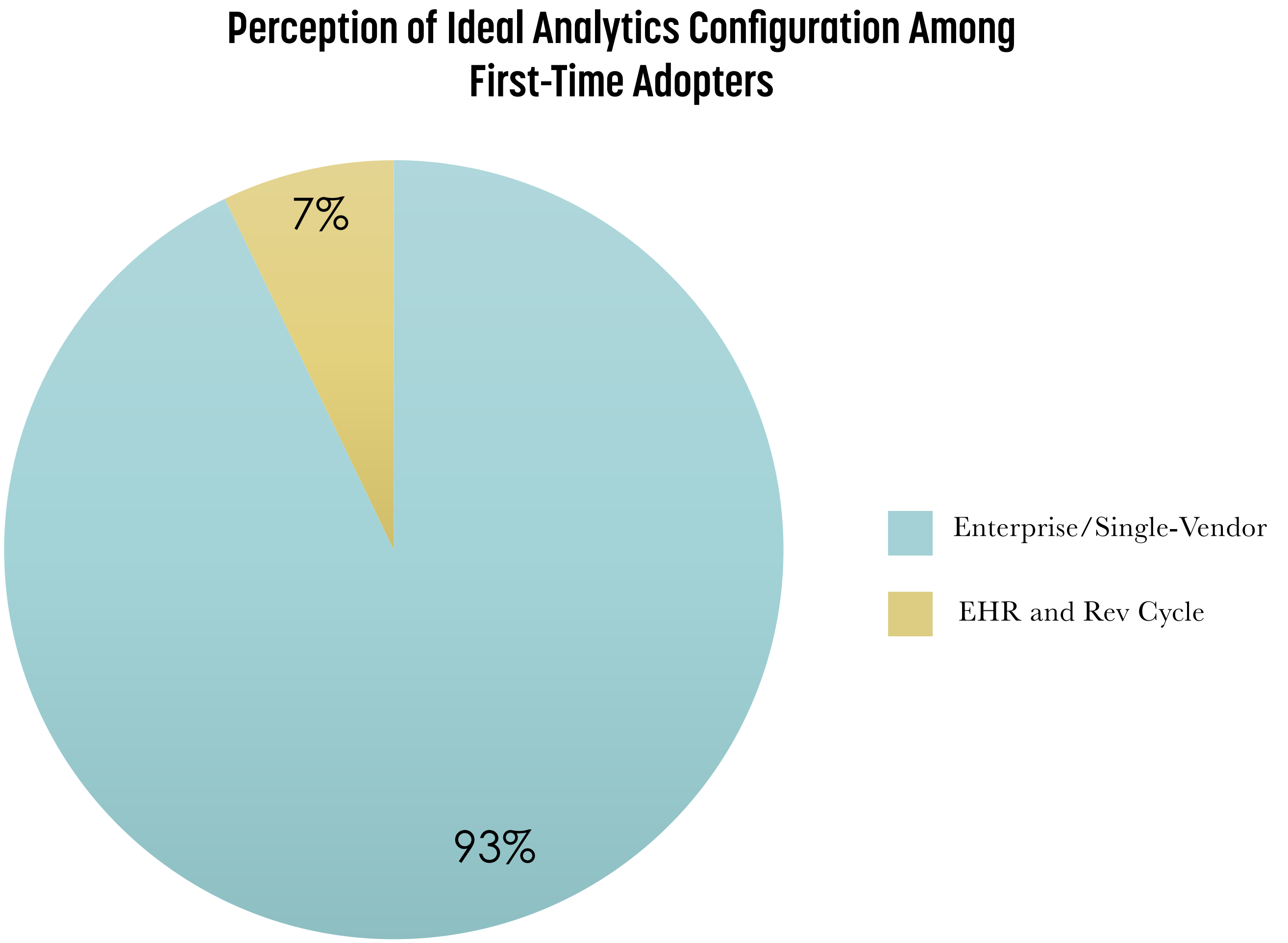
Providers with No Analytics Solutions



Providers with No Analytics Solutions

Preferred Configuration Among First-Time Adopters

Providers who have been sitting on the analytics adoption fence are deliberate in their intentions. When they do pull the trigger--and they will soon--they plan on taking a strategic approach by working with enterprise suppliers (rather than cobbling together a makeshift plan built on existing EHR and revenue cycle management solutions and relationships).



Conclusion

Research without a conclusion is, well, pretty much useless. Our dive into the deep and turbulent waters of data analytics has yielded a number of key conclusions. A few of the most important are:

- The majority of provider organizations (of all sizes) want a single enterprise analytics solution;
- Data visualization, data warehousing, and consulting all have a huge satisfaction disparity;
- Only 1 or 2 vendors in these segments are noticeably ahead of the competition in terms of satisfying their customers — which portends a major shift in market share over the next few years;
- The short-term replacement market for data visualization and enterprise analytics is large (more than 20% each);
- The short-term replacement market for ongoing consulting services and for data warehouses is modest (< 10%);
- A large number of providers with homegrown systems see the need to transition to commercial systems, but these plans are a long way from coming to pass; and
- Many providers are trying to come out of the data dark ages by getting a solution for the first time.

The most intriguing findings are found in the data of the net new deals for enterprise analytics. Almost all of those listed (Cerner, Health Catalyst, IBM, Oracle, SAP, Microsoft, and McKesson) have their own dashboards, data warehouses, and consulting practices. McKesson, while having a very strong legacy in the space because of its HBI and HPM product lines, may find new life when it merges with Change Healthcare, assuming the cultural and technological integrations go well.

Health Catalyst and Cerner are the only healthcare-specific vendors poised to seriously capitalize on the trend towards enterprise analytics. This is primarily because they have successfully married true data warehousing with analytics dashboards and have the secret sauce of consulting services (including best practices).

Suppliers with good Net Promoter Scores should be celebrating and marketing like crazy while suppliers with poor scores need to get their act together very quickly. It's time to hit the panic button -- these markets are due to shift in the next few years if things do not change.

As always, suppliers need to find their niches and play to them. No supplier has created a perfect solution that satisfies provider's needs… yet. This market still has opportunities for new and innovative suppliers, but the markets are getting ready to shift.