Data & Research in Healthcare Analytics
With Zachary Markham

Episode 103

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Zachary (00:00):

Dark data is information that is hidden or not visible to a hospital for a variety of reasons, but it comes down to them not having the time, resources, or insights to uncover their own data blind spots.

Introduction (00:13):

Welcome to the Healthcare Leadership Experience podcast, hosted by Lisa Miller and Jim Cagliostro. Lisa is the founder of VIE Healthcare Consulting and now Managing Director at SpendMend. Lisa and her team has generated over $1 billion in financial improvements for VIE clients since 1999.

Since 2007, Jim, has been a registered nurse working in critical care, perioperative services, and outpatient settings at nationally recognized medical facilities across three states. You'll hear conversations on relevant and trending topics in healthcare and much more.

Now here's your hosts, Lisa and Jim.

Jim (00:53):

Hi, this is Jim Cagliostro and you're listening to the Healthcare Leadership Experience. Today's guest is Zachary Markham, research supervisor at SpendMend. Zach, I know you've been with SpendMend for I think about seven years now, and you've been serving in this particular role for almost

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three years. So, I'm looking forward today to learning more about what you do and how data and research really have a pivotal role to play in healthcare today. So, welcome and thank you, Zach, for joining us.

Zachary (01:19):
Yeah, thank you, Jim. And thank you for the invite from Lisa as well. It's an honor to be here today.

Jim (01:25):
Great, great. Look forward to it. So, Zach, can you please tell us a little more about your role and how your education, your experience, have prepared you for it? Is it a role that you sought out or is it something more that found you?

Zachary (01:37):
Yeah, so like you mentioned, I started with the company about seven years ago and I moved through a few different departments within shared services. One being pricing analyst, another being a data scrub technician. Those are just a couple examples. And learning the ins and outs of other departments within the company really set me up or at least paired with my education, in studying business administration and leadership in college, really set me up well, laid a nice foundation for where I'm currently at as research supervisor. And then, I'll go ahead and just a few examples of, I guess a bird's eye view of what we do in research.

Jim (02:17):
Great.

Zachary (02:18):
So, when we initially get a client's data in, a hospital's data, we jump right on that data and we go ahead, we search account numbers and vendor contact information for each. So, if it's a larger healthcare system, we'll search for each entity within that healthcare system. We'll search for account numbers for all those, as well as the contact information for vendors. And then, for duplicate payments, that's a large revenue stream for us. So, that starts in the data

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scrub team. They scrub down the data and identify some good potential duplicate payments. And a duplicate payment is just an invoice that was paid twice for one reason or another. And once the data scrub team is done with that, they'll pass it off to us and we'll go into our client's imaging systems, where they store their invoices, and we will pull those invoices and pass it back over to the data scrub team for validation.

(03:17):

And I guess the third one here would be just various invoice pull requests for other departments, including the tax team, purchased services, as well as med device, just to name a few. And then, the last one I'll cover here just for the bird's eye view, PHIQ, which is protected health information. So, we've talked about data and it's extremely important to obviously protect our client's data, but it's equally, if not more important, to protect the patient's data as well. So, we have a queue totally set up for each claim that is submitted throughout the company, goes through this queue. And we sit there, and we review every single document that's within each claim. A lot of invoices are included in these, and we'll just review for patient information. And if we do happen to find patient information in these documents, we'll just redact it and then pass it along to be submitted to the vendor for us to claim it.

Jim (04:23):

That's great, Zach. Well, I want to bounce off a few things you mentioned. The duplicate payments, that's something that when I started with VIE and VIE has been part of SpendMend now for about a year and a half, but when I started with VIE, I did not realize how big of an issue that was that many hospitals are having these duplicate payments and nobody's aware of it. And so it really takes someone coming in that has the time and the resources and technology to go through invoices and to see, "Hey, here's a duplicate payment." And I love that you brought that up and mentioned that's a big part of what you do. And also, the patient information, that protected health information. That's one I'm passionate about. I actually served as the HIPAA security officer for VIE for a few years, and it's important, it's so important that like you said, we're not just protecting the client's information but also the patient information. So, thank you for highlighting that.

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Zachary (05:13):

Absolutely. You're welcome.

Jim (05:15):

In your opinion, Zach then, what role does accurate and timely data play in healthcare analytics and how does it impact decision-making?

Zachary (05:24):

I'll give you an example from my time as a pricing analyst. So, as a pricing analyst, we would review data price discrepancies that were about one to two years old from present from what they were currently paying, the hospitals were paying. So, we'd go through identify, "You're paying this vendor $20 for this item, when you should be paying $10 for that item," just as an example. And we would get that and working one to two years behind them. I guess the quicker that we would finish our review and then turn that back into the client, they'd be able to mend the price that they're paying, get it back to the contracted or agreed upon price. And also, collect the credits that were outstanding for the time that they were overpaying. So, I guess the sooner you can identify that you're paying at a higher rate than the contracted price for items, the sooner that you can correct it and get credits from the vendors.

Jim (06:30):

Those credits, if I can ask you, because I've seen long windows, how far back have you seen those? Are we talking months? Are we talking years sometimes just for our audience?

Zachary (06:40):

Yeah, a lot of times it can be years. Two years isn't too uncommon.

Jim (06:47):

And those things go unnoticed, and we think, "Oh, $10 here, or sometimes it's just a few dollars." But over the course of thousands of items and over the course of many years, that adds up. So, getting those credits is a huge part of it.

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Zachary (07:00):

Absolutely. And just kind of going off of that, as you know well, our healthcare systems are just, their day-to-day operations, they're just trying to stay basically afloat at this point. So, all their resources are really just being utilized... They don't have the resources, the time, the money, the resources to really dig in like, all right, what did we do last week? What did we do a month ago? So, that's where we step in and help the clients along.

Jim (07:29):

Awesome. That's a great point. Thank you, Zach. So, I know you and I have talked about dark data. I know that's a term that SpendMend has used often. Can you tell our listeners a little more about dark data? What is it, why it matters, and what can hospitals do about it?

Zachary (07:44):

Absolutely. So, dark data is information that is hidden or not visible to a hospital for a variety of reasons. But it comes down to them not having the time, resources, or insights to uncover their own data blind spots. And I like to think of this kind of as a puzzle. So, when a hospital or healthcare system hands over their data to us, they're giving us basically a half put-together puzzle, and it's our job to put together the missing pieces or the other 50%. They only have approximately 50% visibility into their spend and accounts payables processes, and this dark data is essential to uncover, so our clients have a full set of data to make and implement decisions.

Jim (08:26):

Can I jump in, Zach? I'm sorry. Can you just say that one more time, what percentage was that?

Zachary (08:31):

It's a rough estimate, 50%.

Jim (08:34):

I believe it.

Zachary (08:35):

And then what I always like to say is time and data or money. And then, as far as what hospitals can do about it... So, like I mentioned previously, hospitals are rarely equipped on their own to uncover their own dark data. Again, due to lack of time and resources. And that's where we step in as SpendMend to provide unique services that we do. All of our time and resources are used to uncover hospital's dark data through various tools and good old-fashioned investigating, I guess you could say. And in the past year alone, we've actually delivered $413 million back to our clients. So, that's money directly pumped back into the American health system, which can be reinvested by or reutilized by the hospitals for nursing, if you want to bring on more nurses, staffing specialists, or robotics for surgeries, or whatnot. So, really, we're indirectly, directly affecting patient care and the quality of that patient care, which is what all this work really boils back down to.

Jim (09:48):

I love it, Zach. That's it. And I think it's so important for us to remind ourselves because we can get caught up in Excel spreadsheets and invoices and contracts, which are important. It's a, some people say, necessary evil, it has to be done. It's part of the business. Yes, it is a healthcare. But ultimately, what we are doing, how is it impacting the quality of patient care? So, I love that you brought that out. And Zach, I love that analogy of a puzzle, this whole idea of investigating.

(10:14):

I think of doing a puzzle with my kids and there's so much frustration when they really just don't know where to start, or they don't know where pieces go. But then once they discover, once they start putting together, once they start finding the right piece in the right place, there's so much joy. I just see them get so excited. And I love that SpendMend has a part in doing that, has a huge part in doing that, in helping hospital leaders put together that puzzle, where a lot of times it seems like is there a piece missing or maybe a piece is in the wrong place. So, I really appreciate that analogy.

Zachary (10:44):

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Puzzles can be fun.

Jim (10:46):

Yeah, that's right. They can be. That's right. And you mentioned, I just want to repeat that number again, 413 million, that's from 2023 numbers, is that right?

Zachary (10:54):

Yes.

Jim (10:55):

That's great. But it really is staggering to see how much can be saved just going through the data here.

(11:00):

If you're just tuning in, you're listening to the Healthcare Leadership Experience, and I'm your host, Jim Cagliostro. This show is sponsored by VIE Healthcare Consulting, a SpendMend company, which provides leading edge financial and operational consulting for hospitals, healthcare institutions, and other providers of patient care. Since 1999, VIE has been a recognized leader in healthcare costs, hospital purchased services, healthcare benchmarking, supply chain management, and performance improvement. You can learn more about VIE Healthcare Consulting at viehealthcare.com.

So, Zach, what would you say are maybe the top one or two recovery methods that you find in your work for clients?

Zachary (11:41):

From my perspective, it would have to be duplicate payments and credits open on statements. So, as I was mentioning earlier in our conversation here, we're really more, within research, more of the background, gather the information. We have designated teams within SpendMend that have their specializations, I guess you could say. So, duplicate payments definitely up there, along with credits, open on statements.

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Jim (12:10):

And if you don't mind, Zach, explain that just briefly. The credits open on statements. Is that referring to the credits you talked about earlier or is there more to that?

Zachary (12:20):

Yep. So, the credits open on statements, it kind of goes back to us within research, researching account numbers for each healthcare system, entity within the healthcare system. And we'll be, on their behalf, reaching out for current statements on their accounts there. And a lot of times what we find are just these credits that have been sitting out there open for a year, two years plus. And when they're open like that, you're good to claim that and bring it right back to the hospital.

Jim (12:57):

Sure. Well, and like you mentioned, hospitals are short on time and resources. Sometimes it's there available, ready for the taking, but they need those extra eyes that extra work put in to find those.

Zachary (13:08):

Exactly.

Jim (13:09):

And you might mention this a little further on here in our discussion, but you talked about working with various teams within SpendMend. Would you say your department, at least the research department, you're working with many departments in SpendMend, is that correct?

Zachary (13:24):

Yeah, basically on a daily basis I communicate with multiple other departments within SpendMend. So, a lot of communication going on and a lot of projects coming into us. And the quicker that we can get those done with within research and doing our job efficiently, the quicker we can get it

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back to the other departments to get things put together for our clients there.

Jim (13:50):

Great. A lot of communication, definitely a lot of collaboration going on. So, I guess my follow-up question that will be what are some of the more common... Or even less common, if you'd like to share those. What are some of the more common challenges that you face in your work when it comes to gathering that data from clients, gathering that data from hospitals?

Zachary (14:08):

Definitely. So, imaging systems, that's going to be where... In research, we do a lot of stuff with hospitals and healthcare systems' imaging systems. And I guess I'll define imaging systems in our...

Jim (14:22):

Please. Sure, sure.

Zachary (14:23):

And it's just basically where hospitals store their invoices. So, typically, when we get a new client, and again, this will be a rough number, we get probably 80% or so of those clients, we get imaging system access, which is vital to what we do. Then we're able to pull the documents that we need to support our claims. And not only that, but going back to the data, validate the data. That's imaging systems. And I'll break this down into three main categories. So, some healthcare systems or hospitals haven't invested in proper software to store their invoices or any. So, some hospitals don't have electronic imaging systems, so they're old school, storing their invoices on site within file cabinets. And that's tough for us to get to, unless we go on site. So, it's a lot less efficient that way.

Jim (15:19):

Can I ask you, Zach, you're younger than me, but I know when I joined VIE, I was talking with coworkers and there were times where they're physically going to the hospital, and actually Lisa shared this a few episodes ago, where

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physically going. Was that ever a part of your work, or for the most part, you lean on those digital copies that can be transmitted electronically?

Zachary (15:41):

Yeah, so within my work, I lean on the digital side, but within the audit side, we have had instances where we've gone on site. And when I say we, it's the audit managers or audit supervisors going on site to pull documents and then-

Jim (15:59):

Whatever it takes to get that-

Zachary (15:59):

Yeah.

Jim (15:59):

That's awesome.

Zachary (16:02):

That information is key for sure.

Jim (16:04):

I cut you off. Go ahead, Zach. Thank you.

Zachary (16:06):

Yeah, you're welcome. Not a problem. And I guess number two there would be kind of the same category here. Some hospitals haven't invested in proper software to store their invoices. So, kind of like the first one, they use electronic folders within their system to store invoices, which in my experience with these sorts of clients, it's very difficult to locate invoices. And a lot of times it's not well-organized. It's timely to search for invoices, and a lot of them just straight up aren't uploaded, aren't imaged in these folders.

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Jim (16:44):

It's that puzzle, but you have some pieces that are in another puzzle's box, and you got to go find it?

Zachary (16:48):

Exactly. Yeah. It's a disorganized way of storing puzzles. And then, an issue that I've seen more recently regarding imaging systems, are hospitals upgrading their imaging systems and financial systems and leaving the old one behind. So, in essence, we're losing and they're losing the data that they've collected previously, and just starting fresh. And now, I will say there was one client that did this maybe a year ago as an estimate. They did this. They actually migrated everything from their old system into their new system. And I'm assuming it took a lot of work. It was so smooth. Honestly, pretty priceless to do that, to not lose that old data.

(17:35):

So, I guess when this is happening, when they're migrating to a new system, really we're kind of just left in the dark on what the previous information was. And then, a lot of our audits are actually mending audits. So, I'll kind of go into mending audits here for a moment. It's more of a partnership. An audit, you think of maybe one-and-done kind of deal. But at SpendMend, we like to be more like a partnership. We partner with our clients, and we call these mending audits. So, we might be 90 days behind current or 120 days behind current with a client. And when they get these new systems, we're just sitting there for that amount of time, just blindly going about it. Not blindly. That's when we really rely on the data to make decisions like, "All right, is this a good potential duplicate payment or not?" And yeah, that's when we have to... Well, basically we're not able to validate the data as effectively.

Jim (18:40):

Sure. You mentioned about when hospitals move to a new system, and I know we've seen that at VIE and I think across many departments in SpendMend, we look at invoices from 12 to 18 months back, and that's

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valuable information. That's valuable data, dark data. I mean, it's truly dark if you can't access it, you'll never find it. But to have to have access to that is so valuable. And thinking of that one example that you shared of... I'm sure it took a little extra time, maybe an extra employee, maybe a lot of extra time and a few employees to make sure that those old invoices carried over to the new system.

(19:18):

That's extremely valuable for any hospital leader to know and to keep in mind. That's valuable. "Oh, that's an invoice from a year ago. We don't need to save that." But that is valuable information that we've used. And I know that you've seen to save hospitals money, lots of savings there. Can I ask you, Zach, more about your team? How important is it to have a strong team when it comes to research? I know in all of healthcare at the bedside, we always talked about having co-workers you could rely on that you could fully trust. How important is it in the research department to have a strong team in the work that you do?

Zachary (19:51):

It's essential. So, SpendMend over the past seven years has just grown exponentially. Actually, when I first started, I think we had about 80 employees, and now we're-

Jim (20:05):

And now it's 300 plus.

Zachary (20:07):

300 plus. Well over 300. So, with that growth, our workload has increased as well with that growth. So, I'm blessed with a great team. Everybody on the research team is cross-trained on multiple projects. And so, with that, I can assign pretty much any project to any one of my team members with full confidence that they'll get it done in a timely manner and correctly, which is quite nice. Because like you said, having reliable team members is essential.

Jim (20:38):

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That cross-training is so important. I think, again, I go back to the clinical side where everything has become specialized. And that's great because you want people who are experts and really know the ins and outs of whatever procedure or whatever specialty they're a part of, but to have staff, to have coworkers, to have teammates who are cross-trained and capable of tackling whatever project you hand them, I think that's huge. And I'm sure you see the real benefits of that on a day-to-day basis.

Zachary (21:06):

Absolutely.

Jim (21:07):

So, Zach, I really appreciate everything that you've shared. It's been great, I know for our audience, but personally for me. I like having this little inside look into the work that you do. If we can, I'd like to end every episode with you sharing any leadership advice for our listeners. Maybe something that you've learned or something that's carried you through up to this point in your career.

Zachary (21:26):

Well, I'm very blessed to be where I am within the company as the research supervisor. Anything that I accomplish or get praised for is not mine. It's God who gets the glory. He has blessed me tremendously through my life, but especially here at SpendMend in the past almost seven years. And then, I guess going over to the leadership advice, positivity is essential as well as communication, and then a subcategory of communication would be skillful listening.

Jim (21:59):

I really appreciate that, Zach. That's something I know it's valuable not just for our careers, but I think for life too. So, thank you.

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Thanks for being on the show today. And thank you to our listeners who spent time with us today.

If you have any questions about VIE Healthcare Consulting, a SpendMend company, or if you want to reach out to me or Lisa Miller, you can find us on LinkedIn. Zach is also on LinkedIn. Please follow him.

We, at SpendMend, love helping hospital leaders uncover financial leakage and improve the patient experience. And we're hoping that today's episode gave you some new insights to consider and use in your career and throughout your own healthcare organization. Zach, I can't say it enough, thank you once again for being on the show today.

Zachary (22:38):

Jim, thank you for having me. It was a pleasure and nice to talk to you.

Jim (22:42):

You too.

Speaker (22:45):

Thanks for listening to the Healthcare Leadership Experience podcast, we hope you've enjoyed this episode. If you're interested in learning new strategies, best practices, and ideas to utilize in your career and healthcare organization. Check out our website at thehealthcareleadershipexperience.com.

And oh yeah, don't forget to rate and review us and be sure to join Lisa and Jim, next time on the Healthcare Leadership Experience podcast.

Thanks again for listening.

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MEET LISA MILLER

"It's important for hospitals to have a clearly defined cost savings strategy with purchased services as a component to that strategy. We provide our clients with a focused roadmap to achieve those savings through our expertise since 1999."

Lisa Miller launched VIE Healthcare Consulting in 1999 to provide leading-edge financial and operational consulting for hospitals, healthcare institutions, and all providers of patient care.

She has become a recognized leader in healthcare operational performance improvement, and with her team has generated more than $720 million in financial improvements for VIE Healthcare's clients.

Lisa is a trusted advisor to hospital leaders on operational strategies within margin improvement, process improvements, technology/ telehealth, the patient experience, and growth opportunities.

Her innovative projects include VIE Healthcare's EXCITE! Program, a performance improvement workshop that captures employee ideas and translates them into profit improvement initiatives, and Patient Journey Mapping®, an effective qualitative approach for visualizing patient experience to achieve clinical, operating, and financial improvements.

Lisa has developed patented technology for healthcare financial improvement within purchased services; in addition to a technology that increases patient satisfaction through frontline insights.

Lisa received a BS degree in Business Administration from Eastern University in Pennsylvania and a Masters in Healthcare Administration from Seton Hall University in New Jersey.
She is a member of the National Honor Society for Healthcare Administration – Upsilon Phi Delta. Her book The Entrepreneurial Hospital is being published by Taylor Francis.

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MEET JIM CAGLIOSTRO

Jim joined VIE Healthcare Consulting in 2018 and brings to the role over a decade of critical care nursing experience at highly regarded medical facilities across three states.

During that time, he observed both the 'good and bad' of hospital operations in a number of regions, giving him a unique insight and understanding which he brings to VIE Healthcare Consulting's clients.

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MEET ZACHARY MARKHAM

Zachary Markham is the Research Supervisor at SpendMend. He studied Business Administration and Leadership at Cornerstone University and has keen interest in personal development and leadership.

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