



Applied Data Visualization Healthcare 2020

AN INTERVIEW WITH:



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What do you believe is the biggest opportunity for healthcare organizations and data visualization?

According to a recent report in **CIO** magazine, healthcare data volumes are growing at a 49% annual rate, nearly doubling every two years. With such huge mountains of data, there's no way the typical prior-generation reporting means (like spreadsheets, tabular reports, and the like) can keep up. Again, a paradigm shift is needed because the focus used to be so heavily centered on data **production**, whereas now it's on data **consumption** and putting it in context so it can be made actionable. And data is **NOT** actionable unless it can help the key strategists to **make a decision, answer a question, or solve a problem**. So, making the case for this group might not be as daunting, because if they have any inkling of the elephant in the room (i.e. the **data**), they can be convinced of the need to **capitalize** on what they have, resulting in a unified, comprehensive strategy for tapping into it and reporting on it in a visually compelling manner. Now *that* is where the biggest payoff comes: for you have then made a connection with decision-makers. That's when the light-bulb comes on, and that's where the magic happens!

Please can you tell us a little bit about the data visualization adoption journey. What steps has your organization taken over the past 12 months to advance the application of data viz for decision-making?

It's all about overcoming obstacles and remembering your mission, vision, and goals (i.e. why you do what you do). The first obstacle we overcame:

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the "silo" mentality – rather than each separate group keeping to themselves, getting people to realize this must be a **multi-pronged approach**, requiring **multi-disciplinary commitment**, resulting in **multi-faceted satisfaction** among the stakeholders & targeted audience, even when they don't see immediate results. The second obstacle we're in the process of overcoming: resources – whether it's funding for our initiatives, or lack of targeted resources, or no relief for existing resources who get tasked with yet another project on top of what they're already working on. This happens when leadership hasn't bought into the concept. Thankfully, the leadership at DHHS has definitely bought into it, from the top down; the Secretary of HHS, the "C"-suite, and the IT managers.

Obstacles you say? I say **Opportunities**. **Problems** you say? I say **Possibilities**. **Adversity** you say? I say, "**Adversity** is overcome by **adaptation**." If you can't totally get rid of a problem, find a workaround. And that's what my team at the DHHS Client Services Data Warehouse (CSDW) does on a daily basis!

What is the most exciting application that you've completed so far? What results were you able to demonstrate that you couldn't have shown through any other data tool?

The Secretary of HHS has a phenomenal understanding of the importance of actionable data. She knows counties will be held accountable

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for specific performance measures proposed in the legislature, and without actionable data, they cannot know whether or not they're in compliance. Part of the journey towards the Secretary's ideal includes devising an efficient means for determining who is eligible for different types of HHS program benefits and, conversely, who gets some benefits but not others. Compounding the challenge of assembling the enormous dataset required for this task is the fact that this information is housed in disparate systems with multiple identities. A massive initiative was undertaken to implement a unique identifier for beneficiaries in these multiple systems. CSDW developed a detailed algorithm to match them all together across programs (leveraging this unique identifier), along with a detailed process to anonymize, pivot, aggregate, and summarize the massive raw data into a unified dataset that can then be used by our business intelligence tool, Tableau, to create stunning, interactive visualizations (complete with geo-tagging for the counties). They say that a picture is worth a thousand words. True to that mantra, these visualizations focus our understanding, connect with our creativity, and stimulate our reasoning in a way that no spreadsheet or tabular report could ever have accomplished! This gives the decision-makers the insight they need so they can determine actions to take. The result: we now have an end-

to-end process outlined that can recreate these results, and enhance it with multiple datasets to show trends over time. It doesn't get much better than this!

What are you most looking forward to about the Applied Data Visualization Healthcare conference that you'll be speaking at in Florida, January 22-23?

It is an honor for me to be delivering the opening keynote at this conference; certainly, a responsibility that I don't take lightly, as I will be setting the tone for the entire week. My goal is to leverage more than 30 years of my educational, IT, and HHS experience to communicate with **passion**, igniting my audience's desire for excellence in data storytelling. I always look for a "**lightbulb moment**" – in the same way that the BI specialist needs to make the case for presenting data visually, so also I intend to make the case to get folks not only to see the value of the **data**, but take ownership when they're shown just how valuable **they themselves** are to the success of their organization in the healthcare space. They need to see what's in it for them and that they've got some skin in this game; they need to see the practical benefits and results of following the best practices I'll be sharing.

Regardless of the specific tools that might be used to achieve the BI/analytics strategic goals in your data storytelling, the important thing is to focus on best practices and foundational principles. For instance: If you've never learned how to parallel park, who cares if somebody buys you either a Lamborghini or a Chevy? The tool in your hand is meaningless if you don't have an understanding of the underlying skillset required to use it correctly.

To summarize, I intend to make this exciting so people will catch the wave! More than anything, my goal is to see to it that my listeners are **enhanced, encouraged, enriched, and educated!**

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