



“No one on our analytics team comes from a programming background,” explains Alexandra Mannerings unassumingly, not mentioning her doctorate from the University of Cambridge until much later in the conversation. “Although some people may find that unusual, it is intentional. Our team’s specialty is scientific investigation, not programming,” she continues.



**Alexandra is the director of analytics at the Colorado Hospital Association,** where she has spent the better half of a decade poring over troves of medical data to help Colorado hospitals and policy makers make better decisions.

“My degree is in veterinary science, not computer science or statistics, which sometimes throws people off,” Alexandra says with a smile. “I specialized in zoonotic epidemiology, studying how disease spreads between animals and humans. My background taught me how to conduct sound science and how to ask the right questions of people and data.”



Dominick Kuljis, a healthcare data analyst on Alexandra’s analytics team, nods his head in agreement. “I joined CHA with some exposure to SQL and Excel, but no hard-core programming. When I applied to the data analyst position I was concerned that would end up isolated deep in the ‘technical weeds’ of data analysis,” Dominick remarks while making quotation marks with his fingers in the air.

“I really wanted to focus on what I joined CHA to do in the first place—using my background in public health and chemistry to advance healthcare. **I didn’t know what Alteryx was when I joined CHA, but Alexandra promised that it would allow me to perform complex analyses without getting pigeon holed into a career in programming.**”

“She was absolutely right. With Alteryx at my disposal for analytics, I can concentrate on finding solutions to important problems, rather than getting sucked into a black hole of code syntax or data preparation,” Dominick explains. “It frees me up from data munging, so I can devote myself to higher level thinking.”

“It’s true,” Alexandra adds. “Alteryx empowers people like us, who have little to no computer coding background, to do complex things with data even though we have no one in IT who can write Python. It allows us to follow the ideas in our minds and move from question to answer a lot faster.”



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“One of our most successful analytics projects thus far has been our Alternative to Opioids, or ‘ALTO,’ pilot across emergency departments in Colorado,” Alexandra relays.

Traditionally, opioids have been the primary way to treat pain in the emergency department. Unfortunately, even opioids prescribed by well-meaning clinicians can contribute to prescription abuse or serve as a gateway to illegal drugs, as the opioid epidemic across the United States has made tragically clear. According to data from the Colorado Department of Health Care Policy and Finance, one Colorado resident died every 36 hours from overdose in 2015.

“In January 2017, we launched the Colorado Opioid Safety Collaborative with the goal of reducing opioid administration in emergency departments, where patients are especially vulnerable and were often first exposed to opioids,” says Alexandra.

“In order to achieve that goal, we started with 10 emergency departments,” Dominick explains. “We worked with the Colorado Chapter of the American College of Emergency Physicians to develop new pain protocols that utilized alternatives to opioids for treatments in those ten hospitals. **We knew from the get-go that if we wanted to make a convincing case for adopting new protocols throughout the state, we would need to meticulously collect, analyze, and present the outcome data from our study.**”

“From a data perspective, things were messy, as they almost always are. We needed to join emergency department data with claims base data to see what was happening across hospitals. Each question seemed to lead to another.

“FORTUNATELY, WITH ALTERYX, IT’S EASY TO FOLLOW A LINE OF INQUIRY, WHILE HANDLING THINGS LIKE DUPLICATES AND INCONSISTENCIES ACROSS DATA TYPES.

**Alteryx is also very visual, so we could see trends and changes that were hidden before, such as unusual prescription patterns,** Dominick continues.

“In order to provide a comprehensive review of the effect that the shift from opioids to alternative treatment protocols entailed, we also tracked patient satisfaction,” Alexandra adds. “**We leveraged nationally mandated patient survey data on how well they felt their pain was controlled, as well as how satisfied they were overall with the hospital. The results we discovered at the end of our analysis were astounding. We were able to reduce total opioid administration by one third with no measured decrease in patient satisfaction.**”

“In the evidence-based world of medicine, our work has garnered a lot of interest and excitement. I think a huge part of that is thanks to the elegant and rapid analysis we were able to perform using Alteryx.

When I use Alteryx, it’s like I’m a team of 10 people, rather than just one. Even very early on in my use of the platform,

“I FOUND MYSELF SAYING, ‘WOW. I CAN’T BELIEVE I CREATED THAT. I CAN’T BELIEVE I CAN DO THIS ALL ON MY OWN,’” Dominick recounts.

“Our ALTO pilot was a great success, and our work won’t stop there. We’ve rolled out our findings to 70 additional emergency departments and are working to expand the program to inpatient settings as a part of the CO’s CURE program. Alteryx enabled us to do the heavy analytical lifting required to combat a large public health concern in Colorado,” Alexandra conveys, “and I truly believe that we’re just scratching the surface of the problems we will solve.”