

Zip Code
by

It had been a good day. I was able to review the mortality study with no interruptions from my boss, Dan. With some slick slicing and dicing of the data I was able to find intriguing results that may make this study worthwhile. The predictive analytics material I am studying for the next actuarial exam actually helped in my job. Two birds, one stone. Definitely something to feel good about when leaving a long day of work.

Walking to the bus stop, I enjoy the crisp late September air. Yes, with a reprieve from the Baltimore summer humidity, I walk with a spring in my step and a smile on my face. I look up and realize that the day just got better, or maybe worse, the jury's still out.

"Hello Jon, how are you? Working late again?" Dianne asks. I work with Dianne at the Social Security Administration here in Baltimore. Well, 'with' might be overstating it. I once explained some actuarial calculations to her so she could write a legal opinion for some congressional staffer. It was stupid political BS, but apparently it was important to her. Fortunately, as an actuary, I can skip the politics and focus on what's important - the numbers.

"Hey Dianne, I guess I lost track of time! I was working on a mortality study and lost myself in some strange results and didn't realize how late it was until the custodians were vacuuming my cube."

She chuckles sweetly, "I can't imagine Qx's being that enthralling, but it takes all types to make this place run right?" I am thrilled that she remembers my Qx mortality rate explanation, and decide I will let it slide that apparently she thinks I am part of the 'all types,' which is a bit ironic coming from a lawyer. "What did you find that was so engrossing in those numbers of yours?" She asks.

She's interested! I admit I have had a bit of a crush ever since we went through the new employee orientation together four years ago. She was all business which I found exceptionally sexy. Of course, I could tell by her smirking at my jokes that she was hiding a great sense of humor. I haven't convinced myself to ask her out yet, but I enjoy talking with her whenever possible.

I answer her, “I was looking at variance between expected and actual mortality by different factors to see if my mortality model can be refined to account for new determinants. It turns out that zip code is a statistically significant factor in mortality. This isn’t too surprising, some areas have worse lifestyles and economic status than others, and thus worse mortality. But, I realized the significance was driven just by a few specific areas. Why would zip code 22101 have a materially worse mortality than 22103? When you control for age, gender, income, etc etc, they should have similar actual to expected mortality rates based on my model.”

“Huh, that is something all right.”

“I know, right?!? It will be a big deal if I can determine what makes that zip code different from it’s neighbors.”

“I’m sure you’ll figure it out.” At this time the bus arrives, and Dianne chooses to sit with a homeless looking man so I can have two seats to spread out my papers and review my figures. I can’t wait to figure this conundrum out. Maybe when I have found the source of the anomaly I will explain the significance to Dianne over dinner. That will definitely impress her.

The research into the zip code anomaly has been going slowly. Every new variable I have tested, except zip code, has shown no statistical significance when controlled for known mortality risk factors. It just doesn’t make sense. Three weeks of chasing down dead ends is tough even for an actuary.

“Why are you still data mining that mortality study?” Dan asks impatiently. He is much taller than average and an adulthood of physically looking down on people seems to have translated to a similar mental attitude. We often butt heads on what is important – I want to use my knowledge to make a difference, while he is obsessed with getting work done on time. Unfortunately, as my manager

Dan has crimped my ambitions. He will likely be comfortably entrenched in the government bureaucracy as a middle manager for the rest of his life. He probably would even say that he is happy about that.

“There must be an explanation why certain geographic areas have higher mortality than others.” I explain to him.

“It doesn’t matter. Social Security pays out to the whole United States of America, so lets nail the countrywide mortality and move forward on the solvency report.”

Having spent weeks working on this, I’m frustrated and ready to argue. “We need to understand the results. What if the data is bad, or the model has errors? Then this becomes a professionalism problem. More importantly, what if there is a real factor causing geographic spikes in mortality? The government would want to know to take action right? All these spikes are recent – even going back three years there was no material unexplained variance in zip code mortality.”

“I don’t care.” Dan clearly had never heard of Dale Carnegie’s teachings on winning friends and influencing people. “Your work is past due, which means my work is past due, and that is unacceptable.”

Dan is a strict by the book guy and an asshole, but the government has a very defined command and control structure and since I have rent due, my continued employment is important. “Yes sir, I’ll e-mail the projected mortality rates.”

These deaths are more than just numbers. I decide to take a vacation day to chase down the deaths in zip 22101. Now that I’ve provided the mortality model, Dan is happy to have me out of the office. I’m also happy to escape the sterile cube farm for a field trip. Its a beautiful fall day in northern Virginia, and I revel in the blue sky and crisp air. Walking down the street there are many people

outside enjoying the day, ignorant that their mortality rate is 26.7% higher than expected. Nobody would suspect ill fortune in the well off suburban enclave of Fairfax.

The Fairfax police station is on the corner of Balls Hill Road. Really, who names these streets? The station is designed to be intimidating, and it has the desired impact on me. The sprawling brick and glass building announces ‘indifferent bureaucracy inside.’ Overcoming my nervousness, I enter and introduce myself to SGT Martinez as an investigative journalist for the Last Outpost online newspaper. It’s probably a bad idea to lie to a police officer right off the bat, but explaining why an actuary, if she even knows what an actuary does, would be interested in specific deaths in her city would raise too many questions. I’m here to ask questions of them, not vice versa.

Next thing I know, I am sitting at Detective Trice’s desk. He is an older man with gray hair cut in a high and tight military style. His uniform is immaculately pressed and I couldn’t help but notice his dress shoes have a brilliant shine. Probably a retired Army Drill Sergeant who misses the structure of the military, and he found the closest thing to it in civilian life. I can never relate to military people. His stare does not improve my comfort level.

I stutter through my cover story of investigating tragic deaths in the area and hand him a listing of people who have recently died in this zip code. I explain, “These appear to be mostly accidents, but there are so many of them. I’d like to know a bit more...” I trail off under his stony gaze.

“Fine, let’s see...” He punches at his computer like he would prefer operating a machine gun over a keyboard and mouse. “Johnson, pedestrian hit by a drunk driver, the driver died of his injuries as well. Ramula, drug overdose, Fentanyl, tragic, but we see quite a few of those these days, we suspect a new dealer in the area. Runyon, passed away in his sleep, natural causes. Hmm... Tell me again, why you are asking?” His voice growls like a Doberman.

“You don’t see anything unusual, suspicious?”

“No, we’ve investigated these deaths. We see these regularly, they happen sometimes, just ask an actuary.”

“What?” My jaw drops and I feel sweat dripping down my shirt as my pulse races. Can they know?

“Oh, actuaries count dead people, and it is a running joke around here whenever there is a rash of deaths, that we ‘shouldn’t tell the actuaries,’ or else we’ll have them crawling around here like the journalists, no offense.” Trice chuckles at his joke in an unfriendly manner. “Tell me again about your article topic?”

126.7%, that’s what it is about. Of course, I can’t say that to Detective Trice. He works on motive, opportunity, and evidence. Of which, I have nothing, other than statistics. Finally, I collect myself enough to mumble “Unusual number of deaths, higher than expected.” Under pressure my brain resorts to actuarial terminology unfortunately, it’s what I know.

“Well, if you suspect something untoward, you need to talk with Agent Jones from the FBI, he has been here since the Runyon death. Wait here.” Without waiting for my reply, Trice strides off to a back office.

The FBI?!? This shit just got too real. I pick up my notes and quickly leave before Trice and Jones can return. Outside the station, I rush to the Metro, neither paying attention to the weather nor the people and their 126.7% mortality. I just want to get back home to safety. On the train back to Baltimore, I wonder what is the intersection of the numbers and the people?

Later that night, my kitchen table is layered in charts and graphs. My laptop is running a macro testing one more factor. I shouldn’t have brought the data and model home on a USB drive. But really, there isn’t any personal identifying data, except for Social Security number, name and address, so I think it is worth it. I must find out what is going on.

I can’t stop pacing. My mind bounces everywhere; from the mortality study, to Dan’s stubbornness, then I’m thinking about the exam I really should be studying for, and then to Dianne and the date I’d like to ask her on. I know this is a symptom of a manic episode, and I should take my

meds. But the manic episodes are the productive side of my bipolar, and I need to solve this problem so I can get back to studying. One more failed exam and I'll be kicked out of the actuarial program.

The macro has finished. Dammit, once again the tested factor did not explain the zip code anomaly. At this point, I hadn't really expected it to have an impact. But it was the last data item that I can access, which means I'm officially at a dead end. I don't know where to go from here.

Procrastinating in the political section of the online actuarial forum, I see that the thread on Aaron Runyon's death has doubled in length. Because of the Justice Department's investigation into alleged administration corruption that he was leading, his death made the news. As an actuary, I know his death is just a plus one in my mortality study. Sometimes random deaths occur, that's what makes people willing to buy life insurance. I understand that, but the conspiracy theorists seem to believe this was more than a random death and they are out in force. As a diversion, it is entertaining.

Going back to the study, I decide to take one more look at the specific zip codes skewing the results. Examining each outlier zip code, I see they are spread out across the country. Southern California, okay, Hollywood types are volatile. Southern Michigan, sure, the troubled auto industry has caused a lot of financial hardship and associated health problems. Northern Virginia, of course government jobs can be stressful, especially in the current political climate.

The current political climate? The one with alleged corruption at all levels of the government. Yes, Aaron Runyon lived in zip 22101, one of the outlier zip codes! In fact, when he came to Runyon, Detective Trice got even more reticent, and then he went to get the FBI agent. Who else was dying in the abnormal zips?

I had always focused on the numbers. Every death was an increment to the numerator in a mortality ratio. I avoided thinking of the specific people dying other than their demographic data. But now I realize I need to learn about and understand the people who have died.

I start googling the other exceptional zip codes looking for notable deaths. Most of the deaths that show up on the Social Security Death Master File never make it into the news. Is there an unusual

news story, or even an obituary that stands out? What ‘plus one’ will show up in the other deaths? I become entranced in online newspapers covering the key zip codes.

“Hi Jon, sorry to interrupt, but you were so much help the last time, I wanted to ask you about changes in longevity.” Through my blurry eyes, Dianne looks beautiful in her business suit. I mean she looks very professional.

She continues, “I see that the CDC has reported declining longevity in their latest report. I want to understand what that means for the solvency of Social Security and if the impact has been quantified.”

I have spent the nights the past week online searching news for notable deaths and it is hard to switch gears. “Um, sure, well I guess the reduced longevity is good for the solvency of the fund, uh probably. But obviously, we want to know why the longevity is declining.”

Dan chooses this moment to show up and ruin the moment Dianne and I were sharing. He interjects, “The additional deaths appear to be from preventable causes.”

I really hate my boss. He has the intellectual inquisitiveness of a gnat, and not a particularly smart gnat. I reply, “The key question, though, is why are they not being prevented?”

Dianne is looking at me quizzically when she asks “Don’t those deaths happen all the time? Not everybody takes care of themselves as they should.”

“What I mean is that these deaths may be listed as from ‘Preventable Causes’ such as opioid overdoses, suicide, accidents, alcohol related diseases and other lifestyle causes, but these deaths are far outside trend both chronologically and geographically, they shouldn’t be happening.” I retort.

“Ok, so you’re saying that something new and unusual is causing this increased mortality in some areas of the country?” Dianne gives an elegant summation.

Dan butts in, “Thanks Dianne, we’ll get a full report on the changes in mortality in our solvency projection, and provide a complete impact statement.”

Understanding the dismissal, Dianne leaves Dan and I alone.

“This is a perfectly explainable statistical trait, we have 42 thousand plus zip codes, you would expect to find 420 that are outside the 99% confidence interval. Further, we don’t have a cause on the ‘additional’ deaths in these zip codes.” Dan purports. The jerk actually uses finger quotes around the additional as if it is debatable.

“We don’t have a cause, but shouldn’t somebody investigate why we are seeing events that are less than 1% likely to occur?”

“Sure, I’ll forward your findings to the appropriate agency. Now you need to focus on the documentation of the mortality assumptions for the solvency projection. That’s also a professionalism issue.” Just like Dianne, I am peremptorily dismissed.

Troubled, I sit in my cube looking out the window at the gray skies listening to the rain drops pelt the window. My thoughts are like the leaves being blown around outside. I realize I have figured it out. I’m just afraid of what it all means.

Southern California – Adam Smith is a major donor to the presumptive Democratic nominee. Smith was expected to run a super PAC before his untimely death. He died from an anaphylactic reaction to shell fish. His chef swore there was no shell fish in any meal he had cooked. Without an EpiPen, he suffocated in his bedroom overnight.

Southern Michigan - Adrian Thompson is President of the Autoworkers union in Detroit Michigan and a vocal critic of the administration's trade policies. He was a driving force in the get out the vote drive for the union. With his death, there is a vacuum in the leadership, and a faction of the

union which supports the administration's protectionism has strengthened. He died in an industrial accident when a robot moving parts crushed him.

Northern Virginia – Aaron Runyon lead the independent investigator of the administration. The investigation is continuing without him, but already a new lead counsel has been appointed who reportedly is much friendlier to the administration. Officially, Runyon died of natural causes in his sleep, but the rumor mill reports that he regularly took opioids for back pain and interaction between them and alcohol caused his death.

So many other zip codes with notable deaths across the country. Every zip code corresponding to a crucial political operative. With the presidential election a year away, how much could these deaths impact the result?

Even more baffling is the significant rise in deaths across each zip. One death, no matter how impactful, wouldn't move the statistics for the zip outside the 99% tolerance. There have to be dozens, if not hundreds, of other extra deaths in each area. Are these deaths just random people used to cover up the target death? All these zip codes are in areas that poll strongly for the opposition party. Is it possible that dissidence is now a mortality risk factor?

The excitement of discovery gives way to the weight of responsibility. I can tell the manic is giving way to the depressive. Who can I tell? This is not something I can tell Dianne over a romantic dinner at the Cheesecake Factory. The bureaucracy would have me tell my manager, and then expect that he would feed it up the chain, but Dan's been against this research at every step.

"Send your results to Axel in Legal please." Dan interrupted my thoughts with disturbing clairvoyance.

"What? Why?"

"Dianne is no longer with us."

"Where did she go?" I'm hurt that she would leave without saying goodbye to me. I feel like we really have developed a personal connection these past four years.

“She was found deceased yesterday.”

“That can’t be!” I gasp. A boulder has crushed my chest, and I can’t breath. My body gives up and I slump down on my desk.

“Something about drugs, possible suicide, the police will investigate. I’m sorry, Jon, I know you enjoyed working with her.” With that, Dan ambles off not realizing the bomb he detonated in my head.

I don’t believe it. Dianne was a beautiful and successful person. She wouldn’t kill herself, and she certainly wasn’t on drugs.

On autopilot, I go through the motions of my work. I run the mortality study program with current dates. The results are consistent with the previous results. Single zip codes are unexpectedly bad. That some zips are worse doesn’t matter I guess. Dan would just dismiss it as random variation.

Oh no, 21231 is now on the list of outlying zips. I live in that zip code. A lot of SSA employees live in that Baltimore suburb. Probably Dianne did as well since we took the same bus home sometimes.

I jump as Dan startles me, “You should go home and relax.”

“Now?” I look up at Dan not comprehending

“Leave, get a good book, may I suggest Nicholas Sparks? Turn off the internet, don’t watch the news, you need a break. This mortality study has been stressing you out too much. I’ve reassigned it to Ethan. Hand off your data and reports, and then go home and forget all about it.”

I leave work with a heavy heart. Do the numbers matter? Do the people who make up the numbers matter?

Waiting for the bus, I hardly notice the wind chill which cuts through my jacket. Pinpricks of freezing rain hit my face and I don't care. On the bus, I imagine using hyperdrive to travel to a galaxy far far away. The sleet rushing by out the window makes a passable similarity to stars flying past.

The library is a solace. In a good book, I can lose myself. My mind slows down, and I can feel fictional peoples' emotions instead of those raging inside of me. I find the right book without a problem.

As I leave the library, the screaming of people and sirens crashes into my ears. The cacophony assaults my senses. Flashing lights are everywhere. The smell of piss, shit, and metallic blood hangs heavy in the air. A body is mangled in the middle of the road where it had been thrown. The SUV is crumpled against a light pole with blood on the cracked windshield.

The shaken driver is crying, rocking back and forth, "He just slipped in front of me, I couldn't stop, it was too icy. Oh god, I can't believe I killed him."

I flinch as a hand grabs my shoulder.

"I believe you dropped your book, sir."

He is an old man. I see the gray hair, high and tight, as he forcibly hands back my book.

"I love this Mailer. He describes war so well, I feel like I'm right there in combat." He looks at the body, and adds, "Isn't it a tragedy what's happening?"

"Sure." I mumble. His hand has lingered too long on my shoulder. A cold river of ice water flows down my spine.

I turn, shrugging his hand off, and hurry away. My stride is too assertive, and people start to notice. I don't care. I make it back to my apartment. Locking the door, I feel relief at being safe from the outside world.

A headache is forming at the top of my neck. Shivering uncontrollably, I take off my wet clothes and put on flannel pajamas desperate to get warm. This is not happening here, it can't happen here. My fever is evident. Next week is the flu shot at work. This can't happen now.

The chicken noodle soup doesn't have a discernible taste. I can barely hold my spoon steady enough to get the soup to my mouth. I burn my tongue, but it doesn't matter anymore.

I log on to my e-mail to send a message to my parents. Before I can, a new message box pops open.

Jon, this is Agent Jones from the FBI. Who have you provided your suggestions to? We are investigating your claims and want to protect our investigation. Please don't share this information with anybody else.

Quickly shutting down the computer, I know this is not right. I just need some time to recover. Hopefully there is time.

I get in bed and pull the down comforter up to my chin. I read my book hoping to lose myself...

Nobody could sleep. When morning came, assault craft would be lowered and a first wave of troops would ride through the surf and charge ashore on the beach at Anopopei. All over the ship, all through the convoy, there was a knowledge that in a few hours some of them were going to be dead.