

Speaker 1 ([00:05](#)):

Okay, so hello everyone. My name is [inaudible] and I am part of the altar or you program. And I am a student from UT Austin. I'm a third year mathematics major and minor in computer science. And I've had the pleasure of working with central city concern from Portland, uh, with Matthew and Rachel, who I have with me here. So if y'all would like to introduce yourself,

Speaker 2 ([00:43](#)):

I'm Rachel Hunter, I'm a software developer at central city concern

Speaker 3 ([00:49](#)):

And I'm Matt Mitchell. I manage, uh, the data analytics team at central city.

Speaker 1 ([00:57](#)):

Awesome. So just to sort of break the ice and just get things going, um, what are some of the goals from central city concern and actually before that were like, what is central city concern? I think that would probably be a better question.

Speaker 3 ([01:14](#)):

Sure, sure. So central city concern is a fairly large, uh, homeless service. Non-profit in Portland, Oregon. Uh, we serve about 14,000 people a year across a wide range of services. So, um, first and foremost, we're a housing provider. So we provide permanent housing as well as a bunch of different flavors of transitional housing to help people who are kind of trying to exit homelessness and are on various paths, but to support people along the way, we also provide employment, uh, job training and employment support. So helping people find housing, uh, employment, and we also provide a range of health services. So that's primary care, mental health care, as well as, uh, substance use disorders, services, including kind of upfront helping people, uh, go through detox as well as long, longer term supports. And longer-term

Speaker 1 ([02:21](#)):

Sweet. And what would be some of the goals? Well, I know you sort of already discussed, but like, what are any other goals you would like to discuss as far as like what the motivation is behind sentencing concern? Like, are there anything that, any things that you've noticed in your time working with central city concern as well?

Speaker 3 ([02:44](#)):

Uh, yeah, so, I mean, of course first and foremost, we're trying to end homelessness in our community. Um, but in order to do that, we need to figure out what services to offer, who to offer them to and how do we combine all of the things that we do in, in just the right ways to make the maximum impact. Um, so, you know, the, the history of central city concern, we've, we've been around since 1979, um, we've grown in a variety of ways. Uh, and in many ways you can think of us at least historically as this amalgamation of a bunch of different programs, but over the last, well, since I've been here six years, we've been making strides toward figuring out how to more deeply integrate our services so that we can really provide holistic care for the people, uh, who we're serving. Um, so with, with the broader goal of trying to end homelessness in our community, um, I would say that maybe a sort of, uh, interim goal is, is that work of integration. And in order to do that, well, we really need to understand who we're

serving and our current state, how are people accessing our services now, so that we can have something, uh, that, that firm knowledge base to build on, or, you know, for, for ultimately improving the way that we provide our services.

Speaker 3 ([04:17](#)):

Yeah. And would you like to share any thoughts, Rachel?

Speaker 2 ([04:23](#)):

Uh, I think Matt pretty well captured it. Um, this is, uh, a bit of a segue, but some of the work that you've done that we'll get into in a minute, um, is really helpful. Um, with regards to what Matt just said about integrating our services. Um, a lot of the work that we're looking at now is, um, or the work that our team supports is, um, allowing the organization to have a more holistic view of its services. Um, and also as a result, it kind of highlights areas that, um,

Speaker 1 ([05:08](#)):

That could be better supported. Yeah, no, this is, this is great information. I mean, yeah. As I said, I've only been working for you guys, like for the past, like two weeks and it's still like a lot. I, I don't know. I mean, it definitely, this is very insightful for me still. Um, and then as far as like what I was doing for the past couple of weeks, sort of, to sort of contribute to as y'all's mission at central city concern, um, what started off as, okay. Like, let's like, see if I can start becoming familiar with all this, like client's data, like information that y'all have on all the enrollments of all these people that need the services, um, the community of Portland. And I started to become more familiar. That seemed be, uh, one of the tasks at least that, uh, y'all assigned to me was to, okay, like what are some questions that like, we could try to answer from looking at this data?

Speaker 1 ([06:09](#)):

And I did a lot of data visualization, right. Um, I also did some exploration with like merging tables, um, as far as like tables being like the CSV files that you have, again, on all this information on all these different types of people that are trying to receive help from all of the different, uh, services that y'all provide. And I was just wondering like how insightful has like this sort of like that a visualization and like that exploration been for as y'all's mission and goals that you all have just sort of talked about right now.

Speaker 2 ([06:47](#)):

I think, I mean, from my perspective, I think it's very helpful and as a really strong, um, maybe not first step, but one of many first steps that we are taking, um, in an effort to streamline and understand, um, our client population populations, I should say. Um,

Speaker 3 ([07:21](#)):

Um, I was actually thinking, Rachel, would you describe briefly the, the data set, because I think that's part of how we can talk about how it was all those contributions have been important.

Speaker 2 ([07:33](#)):

Sure, sure. Um, so let me, yeah. Set the stage. Um, we have a data warehouse, which is pulls in information from the electronic health record system. That's what gets filled out when someone has a doctor's appointment or a mental health visit. Um, it also includes information about encounters

between, uh, you know, case managers and staff at the employment access center. Um, and then also, you know, a couple other programs that have their own applications. Uh, we ingest all of that into the data warehouse and put it into, um, some fact and dimension tables that we use for reporting. Um, the data set that you've been working with has largely focused on, um, as you mentioned, this concept of enrollments, which we have that refers to when someone starts engaging with a surface, for example, they might be in a mental health program. So we, when they start that program, we consider that an enrollment.

Speaker 2 ([08:40](#)):

Um, and so what this data set that you've been working with holds is, um, it starts in 2018 and it looks at clients who are either brand new to the organization, meaning they not engaged with our services prior to 2018, um, or they were engaged in services, but previously, but there's been a three-year gap between, um, the last time that they were engaged. So we have this data set that looks at, it takes those clients and it looks at all of their enrollments, um, since then and what we are looking at, or what you've been looking at is a larger question of, um, who's going where basically like who is entering the organization and how, um, so, you know, an example of that might be like, or a question you could ask about that I would say is like, we know we're serving people in the 30 to 40 year old age range. Um, do they tend to enter the organization through program A or program B, um, and you could apply that same question to gender, uh, race, ethnicity, uh, you know, veteran status, things like that. Um, other parts of that data set also include their health visit and employment access center visit history. Uh, I know that we didn't get too much into that, but there's certainly room to explore, you know, like how, what kinds of outcomes do people have if they have X amount of health services visits versus Y amount and so on and so forth.

Speaker 3 ([10:24](#)):

Yeah. And I think the, thank you, Rachel. I think the reason that we were really excited to have you as Waldo working on this is that, um, there's just so much data there. And so many possible questions to ask. Um, we haven't been able to ask and explore all of those questions yet. Um, so, you know, I think really where, where your contribution focused was in, in asking and answering the question who enters, which services first, um, you know, there's probably a few different ways you can spin that question around, but, um, you know, in looking at, uh, the demographics of who's, uh, entering our, our, our programs and in particular, uh, what we've been calling the T zero program, the time zero, the first one they enter, um, you know, that's helping us understand, uh, kind of the distribution of, oh, it actually looks like for people who enter primary care, if that's their front door, they actually tend to be older than the folks who are entering for the first time through our detox center or through our supportive housing. And then that may begin to tell us where we should be focusing recruitment efforts, or maybe different services that we need to, uh, put in place to, to provide the kind of holistic care for those folks that they need. Um, so like I said before, we're to lay this foundation of knowledge about where we are today, so that we can use that to build into a new future.

Speaker 1 ([12:04](#)):

Yeah. And I think I was sort of thinking of that, um, when, when Rachel was talking about, I, I remember like, uh, sort of like halfway when I was working, like with the data exploration that you mentioned that you were, um, yeah, you were very interested in those like initial enrollments and like, what, how does that look like? And like, can we see any patterns? And like, at least the demographics that I board of course were, were race and age. Um, and again, I would have loved to explore some more demographic information as well, but there was a major time constraint. And I think also, uh, talk about that briefly in

a bit, but, but yeah, like those initial enrollments, and as you said, like, we try to, to try to like, see if there's any patterns and like you mentioned recruitment efforts, like, and I'm just curious, what are some ways that you would go about like, trying to improve recruitment efforts or like give you if you noticed that, like, there's not as many enrollments for like a certain race or like at a certain age, and like, you believe there might be some area to try to improve like some more enrollments in that program or like a certain demographic.

Speaker 3 ([13:21](#)):

Yeah. Yeah. And, you know, I know you used the word recruitment, but I'm now thinking that maybe a sort of better phrase for thinking about this is access. Um, you know, if, if some subset of people, um, you know, maybe by race, if like white clients are, uh, entering, uh, one of our programs at a higher rate than people of color, that might be an indicator that we have an access problem, um, for people of color, maybe there are barriers that we just haven't really thought about, um, that are preventing people from, from being able to access our services. And, um, you know, we actually have a whole team that is devoted to client access. Um, there, you know, called client access services, who fairly good description. Um, and they're constantly working on figuring out how to streamline our, um, our intake processes to make it as easy as possible for folks to come in and get the help that they're wanting.

Speaker 3 ([14:28](#)):

Um, and so, you know, sometimes, uh, improving access can look like having different office hours. It can look like, um, actually marketing campaigns and using social media differently to make sure that people know that our services are available. It can look like partnering really intentionally with other nonprofits in the area. Um, you know, we've got a number of non-profits that we partner with, uh, who served different subsets of our local community. And so maybe there are different partnerships we need to explore. So, you know, if we identify that there are barriers to access, that that gives us a place to focus our efforts and their, their, um, teams in our organization that can, can take those insights and run with them to improve access to our services.

Speaker 1 ([15:25](#)):

No. Yeah, of course. Um, anything else to that Rachel or can?

Speaker 2 ([15:34](#)):

No, I don't think so.

Speaker 1 ([15:38](#)):

Yeah. Something else I wanted to also, like talk about, cause I think it's, uh, a very, very, uh, limitation, like throughout, like the programs like the Ulta or you was meant to be like this three months, like program. Um, and I did, I spent most of the programs just trying to look for like people or like mentors. Right. And I mean, fortunately enough, I found a central city concern, um, like late in the, in the program, but then due to also like some legal paperwork and like some training, like, and just trying to get me access to the data itself. I only had about like two weeks to work with, um, the data. And of course that's like the major constraint as far as like what can actually be done in like two weeks and also having to like have the time to set up a presentation, like have all these deliverables ready. So, um, I'm just curious, like what would have been, uh, like my next steps, if I had more time, like after data exploration and getting myself familiar and like trying to recognize some patterns, um, uh, with the, with the data, what would have been like some possible next steps for me? Um, yeah.

Speaker 2 ([17:01](#)):

Um, I can think of a couple, um, and there were really just like questions to explore with that dataset. Um, the first would be, um, or maybe this is the main thing we'll know the first thing would be to, um, sorry, let me think. They're actually connected these two questions. Um, something that's included, I think in that data set is an idea of a positive outcome and positive as you know, certainly subjective, but, um, in our enrollments table, there is a column that is, um, that gets filled out, uh, when an enrollment ends, when the client exits a program and it basically captures what the, why they exited and what the outcome was. Um, so that can be completed treatment. Um, it could be left against medical advice. Um, it could be unknown, it could be incarcerated. There's a number of reasons in there. And so there, we thought at one point about, um, classifying those, those different reasons for exits as you know, positive and negative.

Speaker 2 ([18:27](#)):

Um, so I could see a next step, um, in this project, be asking the question, like, what is the correlation between certain kinds of exits, um, demographics number of health services visits, um, and start tracking some of those, um, those outcome results, like do clients who are duly enrolled in, um, a substance use disorder program and supportive housing have better outcomes than clients who don't and do clients who have six encounters with employment access services, uh, versus three, you know, in the Latinex community, like what is, what are the outcomes there? So those would be, those were like the angles that I would think would be next steps.

Speaker 3 ([19:23](#)):

Yeah. Yeah. You know, one of the things that, that I've heard leaders in our organization, uh, ask over and over is what is the secret sauce we have, uh, beliefs, we have hypotheses within the organization, but what we believe is the, uh, sort of right thing to do for our clients, um, what are the right services to offer? And generally that is we want to offer everything that the client needs, everything that we can provide to help them, um, get onto a path for long-term stable housing. Um, but we're also looking for data to prove that, um, and, and so, you know, trying to, to find ways to prove and disprove the things that, that we believe about the services we offer. Um, I mean, there are so many ways you can, can ask and answer those questions, but that, that would be part of the, the next step is venturing into trying to identify the secret sauce.

Speaker 1 ([20:36](#)):

Definitely sounds like an interesting question to explore again, I wish I had the time to, or like, I wish I would've found, you know, earlier, maybe we would have had time to explore those questions and, but I do want to move on to another topic, um, concerning like just these, uh, these types of questions that you try to answer, um, in order to better help clients, like, are there like just any general limitations or difficulties that, um, y'all have experienced at your time working at central city concern with like working with such large data? Um, yeah. Like, can y'all talk about any possible experiences or how, how has that gone, like working at central city concern to now?

Speaker 2 ([21:29](#)):

Sure. I can, I can start. Um, I think, you know, not unlike your experience working on this project, I think time is a huge, is a huge limitation. Um, you know, this is kind of, uh, a quote unquote experimental data set and some sort of broader, um, like strategic situational planning type of questions. But in addition to this kind of work, our team is also responsible for many different other kinds of reporting that supports

decision making, um, in analysis within the organization. And that's like reports on like who's due for XYZ type of screening and like what insurance authorizations are open and closed. So we manage all of that, um, in a very discreet, like day to day kind of way on top of these sort of more, you know, a morpous research questions. And so really finding the time and incorporating that into our workflow is I think probably the biggest challenge, because in terms of tools and curiosity and, and thinking, um, programmatically about the questions, um, there's certainly like the talent and the interest on our team to be able to do that. Um, we started working a lot more, I think with Python in the last year, which is a really good boost for this kind of work, because mostly we work in SQL, which is great for, um, you know, put pulling data out of places and putting it into tables, but like not the best tool for slicing and dicing visualizing. Um, and so having the internal capacity to just really like take the time and explore this data, uh, with that tool in those frameworks is I think right now the biggest obstacle for our team,

Speaker 3 ([23:41](#)):

I would agree with that. Um, you know, our, our, our job is to support the needs of the organization. And there are always day-to-day needs that are arising, that, that it's our job to, um, to step in and help with. So some of these bigger picture questions, um, you know, it's, it's just hard to carve out time, but, you know, in addition to that, another, I mean, I guess you could call it a limitation. Um, but, but another challenge with working with this kind of data is, uh, just the fact that although what we see are tables with, with lots of numbers, what we're really talking about are human beings who, uh, have complex lives and feelings and emotions and experiences that, that the data just can never fully capture. So, you know, we're trying the best we can to, to approximate some of that and glean insights. Um, but there's a lot that the data itself can't tell us. And so, uh, one of the things that that's often a challenge is trying to figure out how to supplement what we see in the quantitative data with the, the, the voices and experiences of the people who actually show up in the datasets. And, um, you know, in the organization, we are, we're growing that capacity. Um, but being able to fill in some of those gaps with qualitative information, uh, is also important and something that we, we haven't mastered yet.

Speaker 1 ([25:24](#)):

No. Yeah, that's definitely an important point. Like, do you have all these quantifications is like storing all this information from people, but then the day, these really the lives of many individuals. And that's why, like, at least every time again, I've been working with like, sort of homelessness data for a couple months. And like, I'm always trying to remind myself, like, these are like the lives of many people, and it's like always important to just take as much caution as you can afford him with like such sensitive information. Um, but yeah, that was definitely an important, uh, thing that you covered there, Matt. Um,

Speaker 2 ([26:01](#)):

One more thing, I just had this thought, um, just about, um, working with data and that sort of thing is like, you're also working with many, many systems that, you know, we were just talking about human beings. Like we're working with human beings who are doing data entry, uh, essentially. And so there's also into systems that have been around in various versions for, you know, 20 years. Um, and so there's room for human error on that side too, which, you know, has a downstream impact on some of the data sets that we work with. So I think another part of our challenge as a, as a team and organization is moving.

Speaker 2 ([26:45](#)):

I mean, this is like a constant balancing act when, when you're, when you're just like, when those are the systems that you work with, um, because you know, things happen and things get overlooked. And so it just like understanding where there might be gaps in data and the reasons why, um, I think, you know, we, uh, we have in that, in the data set that you were working with, um, like health services, data, and, um, employment access center data, but we don't have supportive housing data. And that's just because the system that those folks work with is not as easily accessible to us in the same way. Um, and you know, certain programs, I mean, I'm kind of like veering off course now, but, you know, there's just, when you're working with large data, the data entry that gets it there in the first place can sometimes be a hurdle, I think is the point that I was trying to make there.

Speaker 3 ([27:44](#)):

Yeah. And I know was, well, they even helped us uncover one of those issues. There were a lot of people in the dataset who appear to be 120 years old. And I can guarantee you, we did not have a whole bunch of clients born in 1900 data entry issue.

Speaker 1 ([28:04](#)):

No. Yeah. I remember seeing that when I first plotted those, um, visuals and I was like, yeah, that seems like quite a bit of 120 year old, um, clients. I'm not sure if that's completely correct. I mean, at first I was like, cause like I was like, oh wow, I'm impressed. You know, like people can, but yeah, but not to get off topic too much. I do want to move on to, uh, a next like sort of interest question is like, what's like, um, so one of the questions from the author use, like what's a different, or like better approach, uh, in, in like the way that like I tackled, like the assignment that y'all gave me, but like, since it was mainly like data exploration, the technique itself and the tools aren't necessarily all that new and unique, but, um, at least from my perspective and like my, I don't have a whole lot of experience in data science yet.

Speaker 1 ([29:11](#)):

I'm still like, that's what I'm working on, but at least from what I've seen so far, like these different independent projects that you're a part of and like they perform all these different techniques, they all tell like a different story and there's different patterns that you'll see and they like kind of form like, so like the outcomes out of like the data exploration and these tools are, can sometimes be unique to that independent project. And that's sort of like my take on like, what's the different approach, I guess, in what I did that it's not the tools themselves are not new, but like it's still like a very necessary step and like any like that eScience approach to like any sort of issue. And I was just wondering what, like y'all stopped on that.

Speaker 3 ([30:00](#)):

Yeah. I'd agree with that. I mean, I think that kind of like Rachel mentioned earlier, um, part of what you were able to really bring to this was time, and I really appreciated your methodical approach of working through all of these different ways of visualizing, just a handful of demographics and you divide devoted more care and effort to that. Then I think anyone on my team would have had the time to do, um, so you're right. Maybe the tools aren't, um, aren't new, but they're, they're really important fundamentals that, um, sometimes we just don't have the capacity to spend time on. Yeah, absolutely.

Speaker 1 ([30:51](#)):

Yeah, no, definitely. That's, again, that's just like, from my experience, but like, I always, at least sort of been seeing this sort of pattern in my little bit of experience in data science projects. Um, and lastly, I do



want to move on to the last, uh, question of interest as we've been talking for quite a bit now. Um, so like one of the things also is like, again, I think we addressed this already at the beginning. It's like, I got it at the end of the day is like, what's like what I was doing and like what y'all assigned me, like who cares? Right. Like, and then like, of course it's an important matter as we've already been talking about, but like in what ways could, like what I'd been doing, how could like possibly like help people like in like this, that exploration and like, and if like with what I was able to provide, like in what ways do you think, like, perhaps like if you see this pattern, like what would be like, just like a way that could make an impact in the lives of like many people like in the city of Portland?

Speaker 3 ([32:01](#)):

No, the, the way that I would answer that would be to, uh, talk briefly about, um, sort of, uh, the science of, of, uh, quality and process improvement and, um, you know, as much fun and as exciting as it can be to dream up the way we want things to be in the future. Um, it's just as important to understand where we're starting. If you don't understand, if we don't understand our current state, um, we don't have a firm foundation to build on to create the future that we want. So, um, part of what you've helped us do is understand in new ways what our current state is, and that becomes a foundation that we can build on. Um, we, we now have a richer understanding of the demographics of the folks who, you know, who first come in our doors. Um, I'm not sure yet what tangible, uh, changes that's going to lead to, but it is an, it is a necessary part of being able to create those plans.

Speaker 1 ([33:14](#)):

Yeah, definitely. Cause like being, or at least from like what I took from like, like the daily meetings that we had is like, it's something that you also just want to be aware of, right? Like all these different demographic information to make sure you're not overlooking like a specific like race or demographic and like certain, um, age group. And again, I'm just sticking to race and age right now because that's the only thing I had time for it. Right. But of course, like these are very important things that we always must be mindful of.

Speaker 3 ([33:48](#)):

Yeah. And you know, that, that actually also makes me think, um, one of the things we didn't have a whole lot of time to talk about together, but I was certainly paying attention to, as we were reviewing the work. Cause, you know, I was, I was trying to keep an eye out for disparities, um, are particularly racial disparities. Were there differences, notable differences, um, in the ways in which people accessed our services, because that could be evidence that, that we are inadvertently putting up barriers. And um, you know, I think that still merits further investigation, but I have to say I was happy to see that, but nothing jumped out at me. Um, but, but that kind of eye toward equity is something that we know we want to bring into any of the work that we're doing. And I think you've helped us, helped us do some of that.

Speaker 1 ([34:46](#)):

Any thoughts, um, to add Rachel or

Speaker 2 ([34:50](#)):

I, I think Matt said it really, really well.

Speaker 1 ([34:57](#)):



No. Yeah. Well I think we should probably wrap it up. Um, we've been going on for a bit and I don't want the zoom to close out on us. Um, but it's been a pleasure, um, working with central city concern and of course, uh, both of you and Jake as well is not here, uh, in this meeting, but yeah, it's been a pleasure. Yes. Pleasure working with you. Okay. Thank you. And thank you to all have been listening thus far and hope y'all have a great day.