

Actionable Night by Night Shelter Data



Increasing Capacity &
Building Connections:
Bridging to the Future

Introduction

- Jeremy Heyboer (Jeremy@suburbancook.org)
 - ▲ Data Quality Manager and Lead Trainer
 - ▲ 10 years as an HMIS Administrator at the Alliance to End Homelessness in Suburban Cook County
 - ▲ Directed a Family Homeless Shelter and worked with homeless youth and children on the West and South sides of Chicago and was a hospital chaplain on the Northside.
- Our Great HMIS Team
 - ▲ Peggy Troyer, Lynn Suchwalko, and most recently Erin Matheny
- The people who made us great: Brittany, Robin, Mario, Sarah, Stephanie, Art, Lisa, Javon, Bruce, Joann, Tammy, Jessica, Jake, Mario, Shaina, Carol Marie and Todd...plus so many more...
- Cook County, Illinois has the 2nd highest county population next to LA and Suburban Cook covers about 48% of that population, almost 2.5 million people as of 2017.

#Our-users-rock-more-than-yours

Data is not just for Funders

- How can this data help Case Managers or Agencies?
- What information would case managers need to make their jobs more effective?
- How can the data serve the users and make their effort in entering the data worth their while?
 - Example: Thank-you Cards to Churches from our PADS Programs

#DATAtothepeople

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Because my background is in direct service I often find myself asking....

Recording where the night of shelter was (which church) led to a report on the number of clients and nights of shelter each church served which helped agencies follow up with those volunteers with concrete numbers and thank you cards.

Defining Night by Night (NbN) Projects

- These are the clients that have an Entry into an ES shelter but might only show up a few nights scattered throughout a week or month, etc.
- Out of 5 NbN Shelters:
 - 4 are seasonal PADS Projects utilizing different churches each night to help provide shelter for their clients.
 - The 5th is only open 3 nights a week.

#54churcheseveryweek

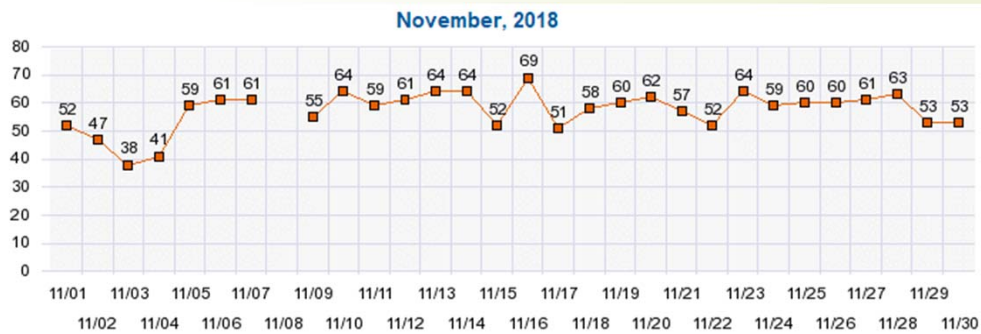
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So where to begin...We are going to start easy



The Biggest Game Changer was a Silly Line Graph



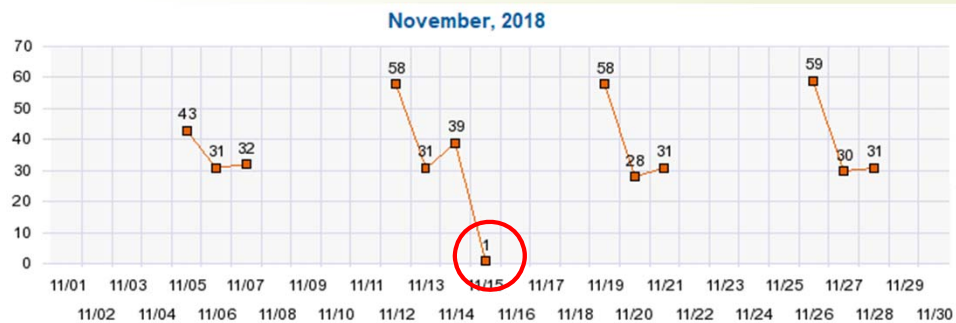
#linegraphs? #really?

I love line graphs for NbN shelters. It's why the line graph was invented.



- Just a simple count of clients on each night of shelter
- This project missed a night of data entry on 11/08/2018 and you see it instantly
- This graph was the key to getting the buy-in we needed to enter the voluminous amounts of data that nbn shelters enter.
- The first time I provided a monthly/quarterly chart like this, eyes lit up, #theDATAkindofLit, sign-in sheets were found and the data for the gaps entered.

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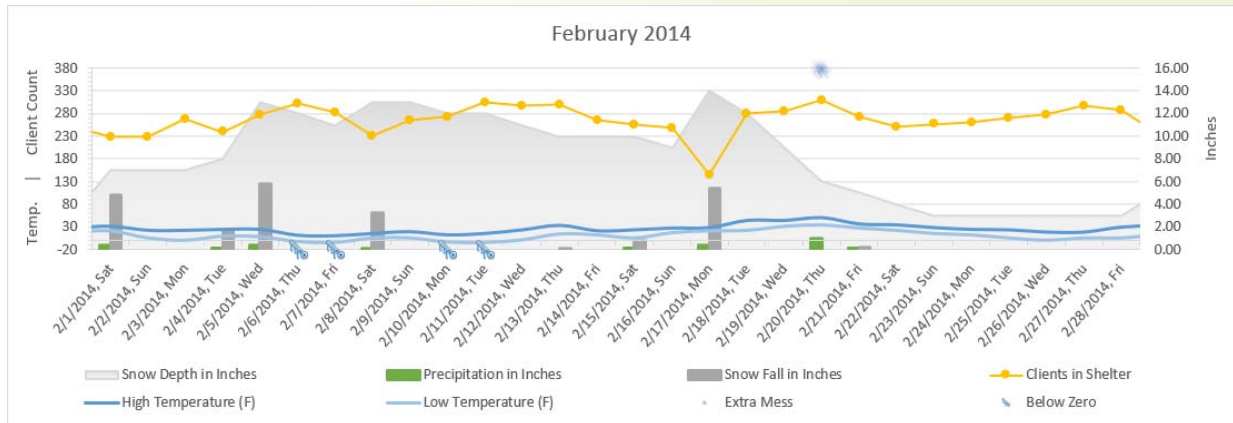


- This is our only NbN project that is not a PADS program, it's open 3 nights a week, and you instantly see a DQ error.
- I also see that there are about 25-30 people who don't like the PADS church open on Tuesday nights...or...the PADS Agency is still looking for a church to fill in those gaps, or the church location is an issue.

#dqbaby #mindthegap

The simple line graph IS brilliant.

The ~~Silly~~ ^{Brilliant} Line Graph meets Old Man Winter



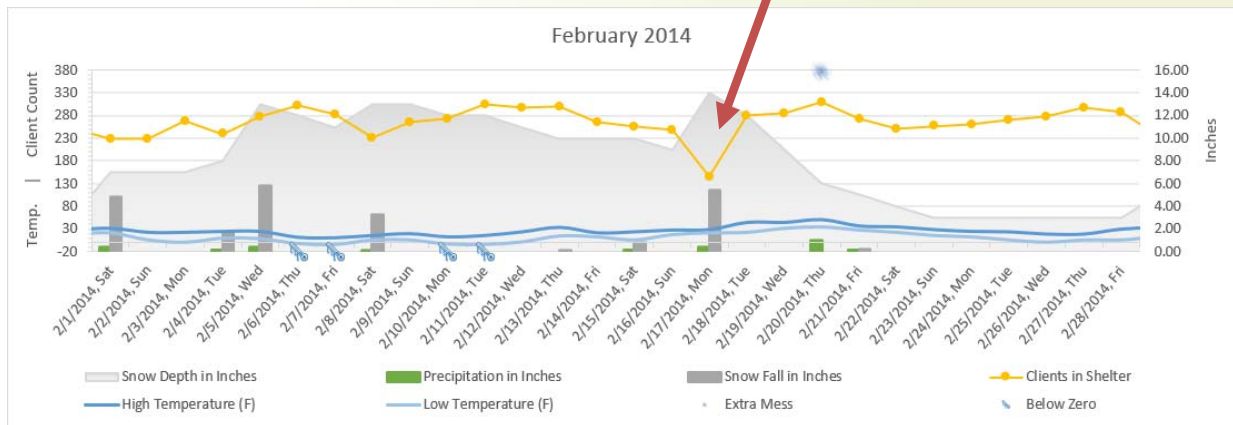
#brrr-it's-cold-in-here

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1. Downloaded Data in .csv form from NOAA website and created this in Excel.
2. Give the visual context: Temperature and Client Count on the left, Inches on the right.
3. Gray shading is depth of snow on the ground.
4. Gray bars are the inches it snowed that day
5. Green bars are how much precipitation was on that day...essentially how wet the snow was if there was snow.
 1. So on February 5 it snowed 6 inches, which was less than an inch of actual precipitation.
6. Below Zero flags and extra mess flags (rain/sleet/windy)
7. Temperature highs and lows for each day.
8. Point out The extra mess (like sleet), plus temperatures above 30 led to a drastic decrease in snow depth on February 20.
9. I admit, this was more a journey of curiosity than it was looking for actionable data for our users. Maybe we could use it to help think about staffing levels during snow storms, but I really just wanted to see what would happen.

The Dip that Made Me a Dip



#fallingup #sharingfailures

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February 17, 2014

"The Dip" that made me a dip. For the record, this is my memory of it.

I had 9 months of these charts and I was looking for any correlation, any hint, that the weather influenced our nightly client count, thinking bad weather would lead to more clients. And although it seemed, overall, that the numbers weren't actually effected much by weather, I saw that 2/17/2014 and thought I had something...something I hadn't expected. I remember the snow storm that night. 6 more inches of snow...

We were having our annual Night by Night shelter meeting and I began showing a series of these charts. The energy shifted, people weren't bored with data! So for the big reveal I got to The Dip and began asking rhetorical questions for the obvious conclusions...Do you think we would have LESS clients because they can't get to the churches open that night or they stayed at somebody's house or garage knowing the weather was so bad, people probably being more compassionate during a snow storm?

The weather obviously caused the dip. Then 3 things happened...

What the Data Didn't Show

1. The data had been lost. About the same amount as the depth of The Dip.
2. Location is a much more powerful determinant than weather in our context.
3. Front line staff are crucial in helping us interrogate our data.



#youknownothingjonsnow

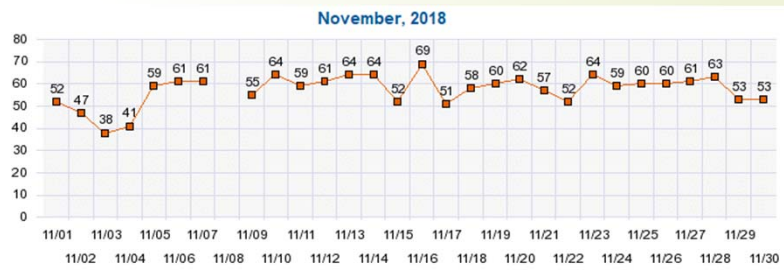
10

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1. A hand went up and reported that they lost their sign in sheets from that night and the data had not been entered. It has only happened once in the 8 years we have been collecting the data. And it was February 17, 2014...the night of the snowstorm.
2. An executive director of another agency with quite a bit of experience said weather is not usually a deciding factor in client counts, but which church is open that night, depending on if they like it and how far away it is from where they are.
 1. Both of these answered 2 questions I had failed to ask...or never even thought of. As a DQ Manager, I should have seen the first one coming.
 2. The data never showed that it was harder to get to the locations or that people were being more gracious during a snow storm like I was imagining. It did lead to more questions about data quality but the executive director experience was correct, weather doesn't play a major role in our nightly counts.
3. Leading me to realize...Front line staff...

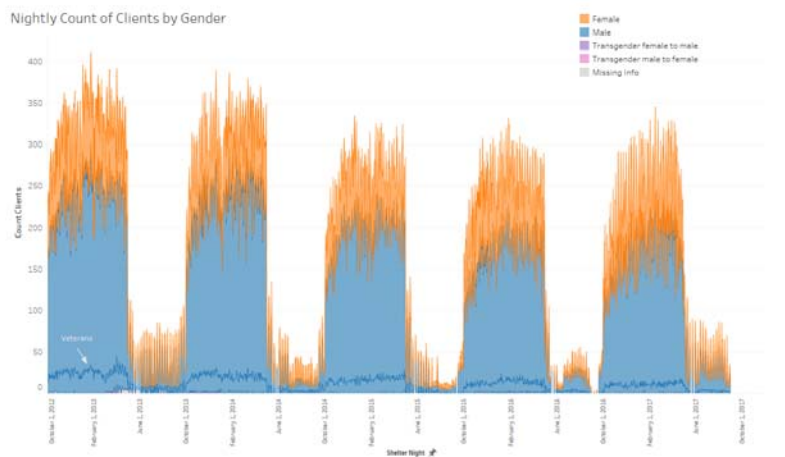


The Line Graph Morphs

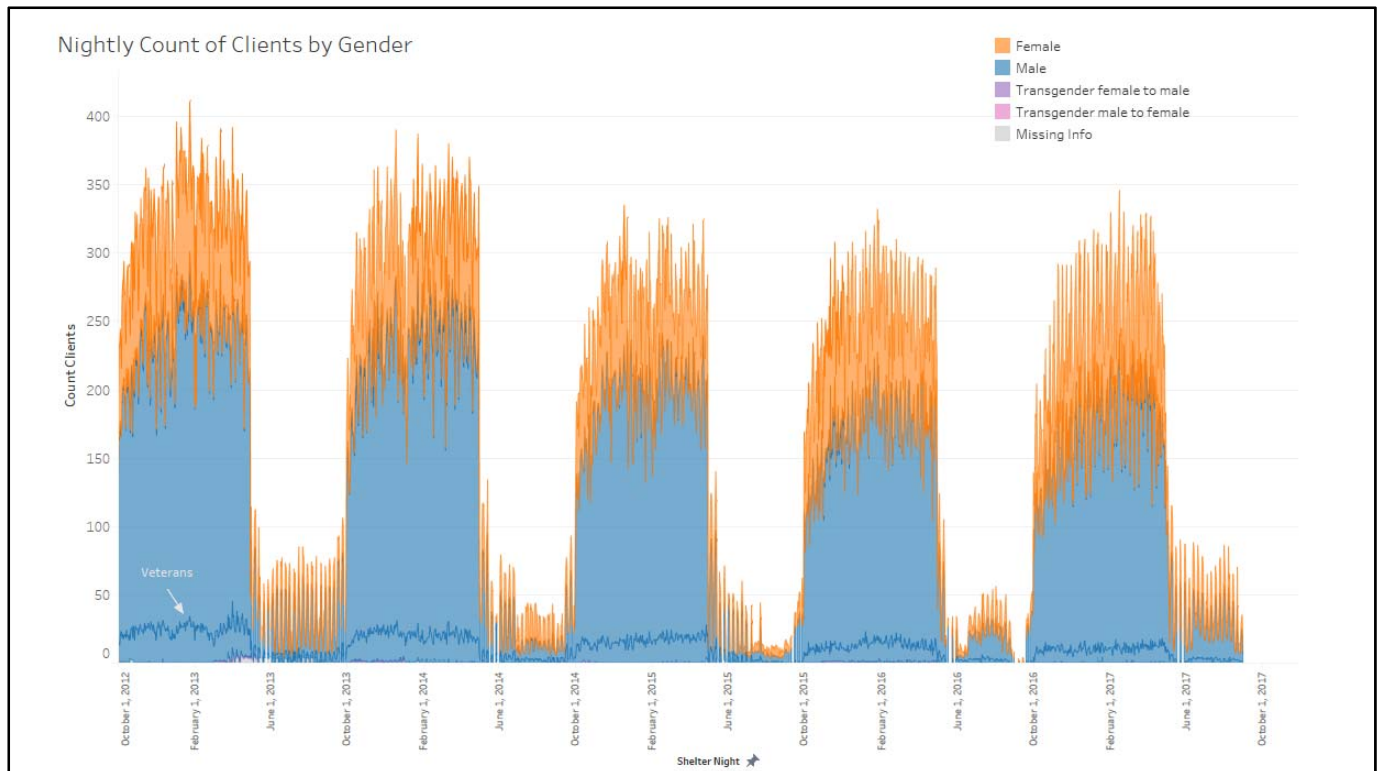


#redpill #rabbitholebegins

The Line Graph Morphs



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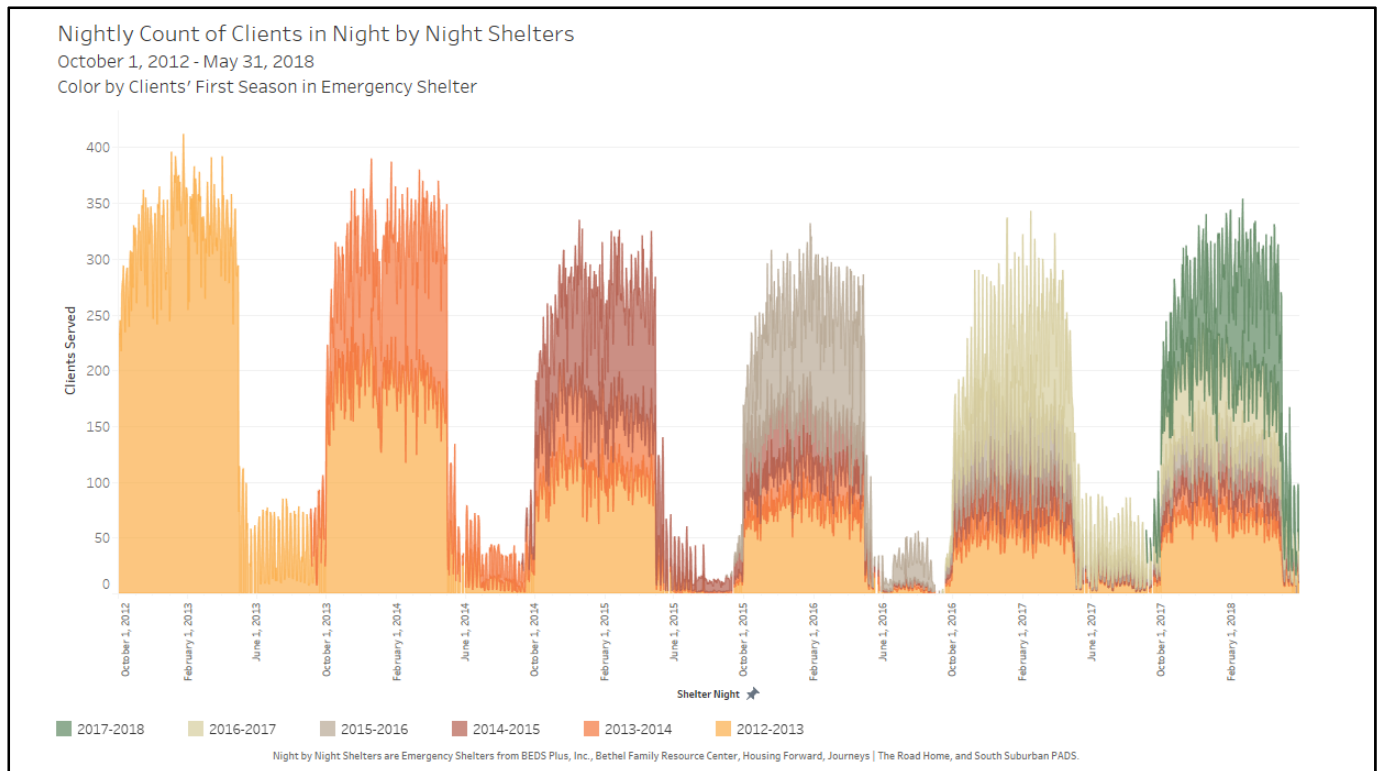
Charting over 5 seasons, adding area to the line graph and coloring it by Gender definitely added some pop. These are mostly seasonal shelters as you can see.

There's also a line of Veterans.

This is great as descriptive data, but it didn't give our users much added information. They already knew they mostly served men, and that the homeless VET population has decreased the last several years.

I was still looking for Actionable Data. Could I group the data set in a different way and find that actionable data? What if I could find the hardest to serve in the data? Pinpoint the highest utilizers of shelter?

What if I grouped the data by the first year a client received their first night of shelter?



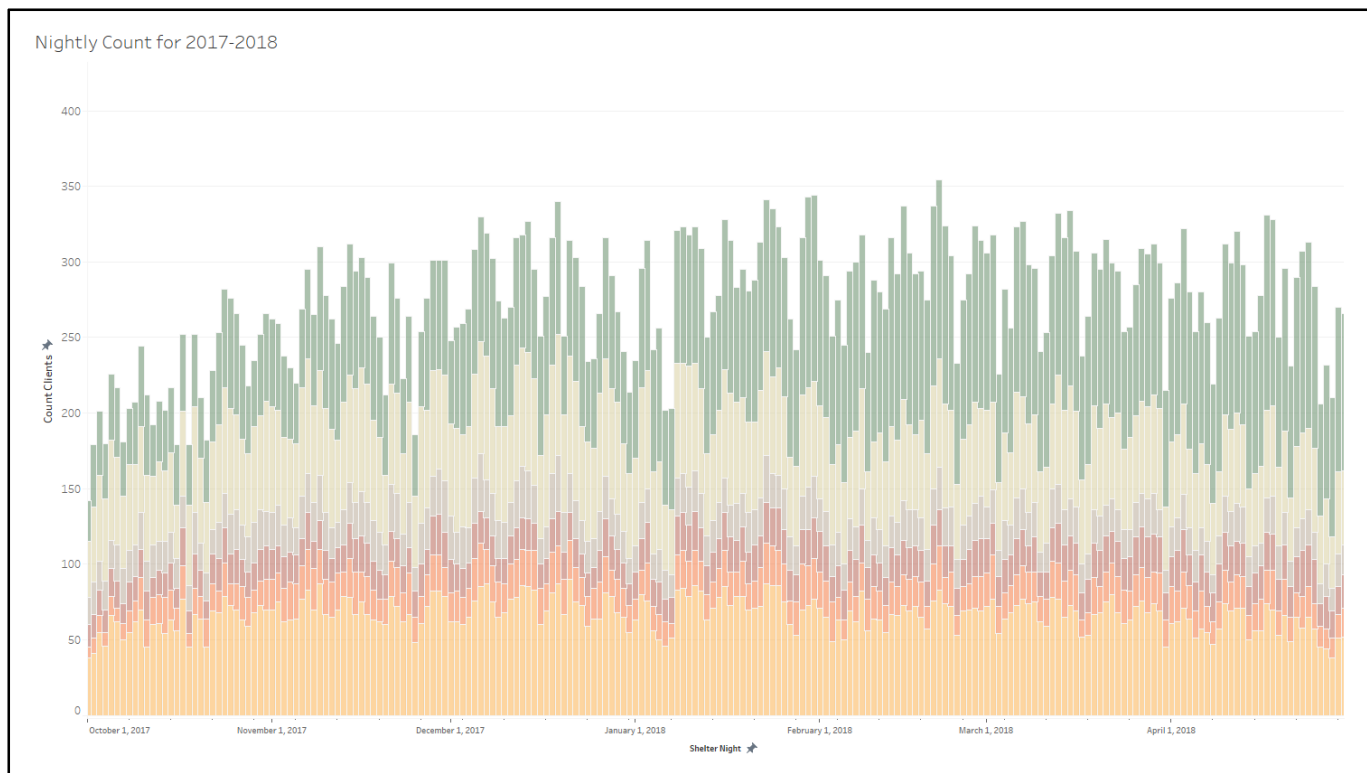
I added one more season and colored coded the chart by when a client's first night of shelter took place.

The first 3 years are a bit misleading because I had to start somewhere, and I didn't trust the data before 2012. 2012 was when we had everyone on board and things were starting to cook. So most of those clients probably had their first night of shelter before 2012, but October 1, 2012 was my lookback date (in accordance with SPM's as well). However, if I had data back for the last 20 years, then 2012-2013 data would look much more colorful like the 2017-2018

Exploring the chart, however, you can see how a good chunk of new clients each year don't return the following year. <Point out 2014-2015 red to the 2015-2016 red.>

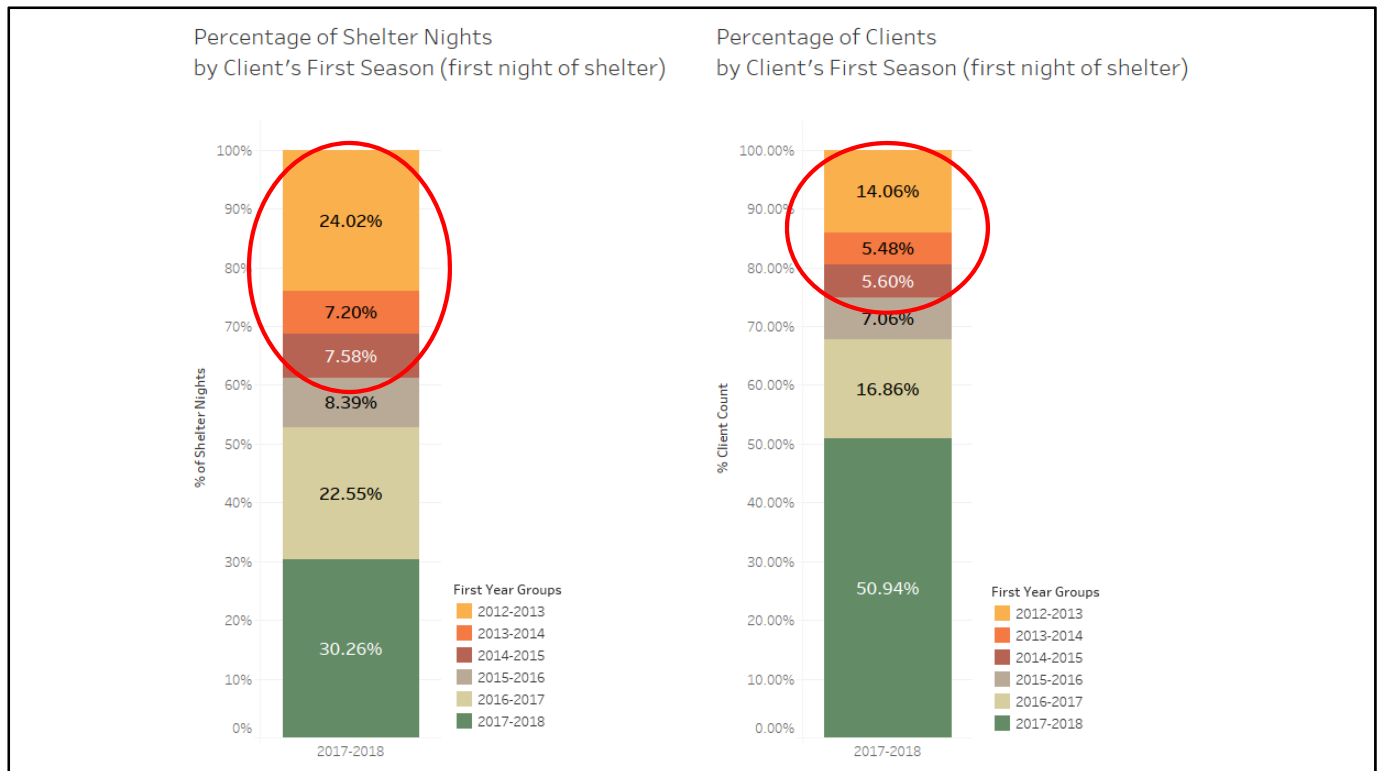
But what struck me was that it looked like about 1/4 of our clients on any given night in emergency shelter in the 2017-2018 season had their first experience of homelessness during or before the 2012-2013 season. Nearly 1/3rd of the clients had their first night of shelter beyond the HUD Chronic Definition time frame of 3 years.

A fascinating aside...at a meeting discussing how we can collaborate with health data systems, a person from the health sector mentioned that nationally, 1/3rd of Emergency Room users are considered Persistent Users, showing up year after year. I haven't had the opportunity to follow up with that statistic, but did bullet journal it with a shaded box.



Here's a closer look at the 2017-2018 season. About 120 clients a night had their first night of shelter 3 or more years ago.

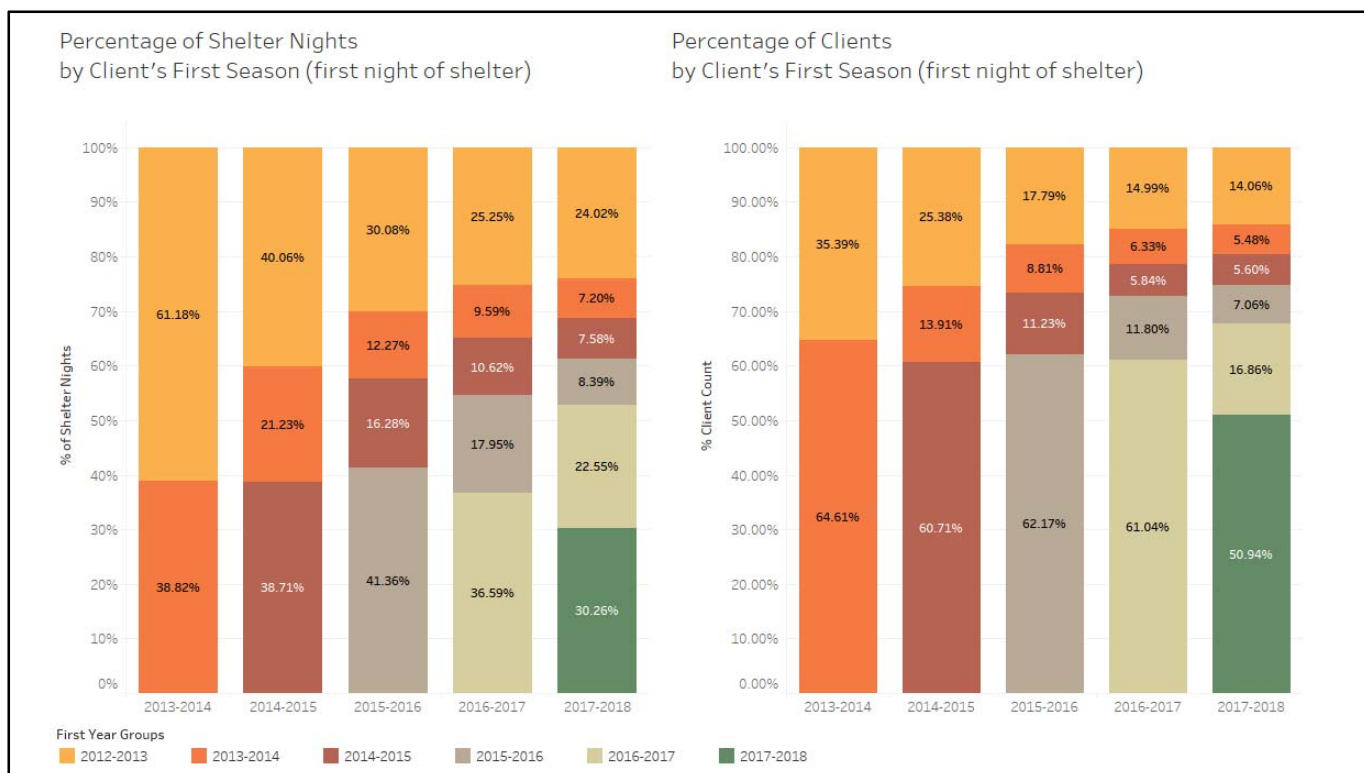
Also, notice there's a dip in this data as well. It wasn't a snow storm! A church actually stopped volunteering and it took a couple nights to shift through the chaos and find more space.



And so when we further looked at the numbers we found, a little over 25% of the clients served in 2017-2018 had their first night of shelter 3 or more years ago
But they accounted for about 38% of shelter nights during the year.

To interrogate further I wondered about what I call the Frequently Infrequent. Those clients who have shown up year after year, but only a few times a year because their partner kicked them out of the house after a binge or an episode of some sort. So I took out all the clients who had shelter during multiple seasons but overall had less than 30 nights of shelter. There was not much change at all.

Meaning...THESE clients have been in shelter night after night.



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<Circling the orange and red>...These clients have been in shelter night after night. These are the clients that are beyond chronically homeless. They are stuck.

Action and Response

- Each agency received a tailored list of clients.
- The challenge was to house these clients.
- When presenting these to the agencies, the first person to speak was a clinical director who said something like “Yes. We *know* these clients because they are here year after year. But to see it like this...I think it really challenges us to reach out to them again.” #theDATAkindofLit
- #theDATAkindofLit = **Helping case managers and program directors see their clients again for the first time.**

#tselliot #cornflakes #thedatakindoflit

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After sharing the charts with the Night by Night Agencies, I gave each of them a tailored list of clients ordered by how many nights of shelter they have received beginning with the clients who first experienced shelter in 2012-2013 or before.

The challenge was to house these clients. Make sure these clients are showing up on our By-Name-List, that their disability is fully documented, anything they need to do to get these particular clients un-stuck.

When presenting these to the agencies, the first person to speak was a clinical director who said something like “Yes. We *know* these clients because they are here year after year. But to see it like this...I think it really challenges us to reach out to them again.” #the-data-kind-of-lit

We shall not cease from exploration, and the end of all our exploring will be to arrive where we started and know the place for the first time. T. S. Eliot

Shelter Responses

- For one shelter, all of their “High Utilizers” clients were assessed.
 - And over 20 of the clients on this list has since been housed, a number of them through CE, but not all.
- Another Agency started off with the list and knowing them will have similar numbers, but I didn’t get them in time for today’s presentation.
- 2 other agencies said something like, “Oh yeah. That list. ...um...could you email me a copy of that list.”

#doh!-follow-up.

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Sometimes our shelters are stuck since they have been doing this a long time. So just giving them actionable data still requires follow-up.

Finding More Question is Actionable Data

- Questions from the Gantt Chart: What's in a gap?



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- Questions from the Gantt Chart: What's in a gap?
 - Case Managers can see the patterns of shelter nights and ask clients where they go when they are not at shelter.
- It also makes me wonder...even more questions I should ask frontline staff.
- Questions from a scatterplot of Night by Night data:
 - Why do white males stay nearly 30% longer than black males in the same shelter?
 - Why is the proportion of black females to white females nearly double that of the same for males?

#alwayskeepquestioning

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The scatter plot used in Tableau to take a look at Race and Gender. We had about the same number of black males and white males but white males stayed 35% longer.

But we also had nearly double the amount of black women than white women, though they stayed about the same amount of time.

End going back to slide 19 and showing how clients are spending a lot of time together. They KNOW each other. Can they become their support networks? Can shelters foster an environment to build those relationships into more healthy people over all. Maybe instead of housing them one by one, or one family at a time, we take it a step further and house people near one another so that support can continue? Or do some clients never want to see each other again considering their struggle?

Sounds like a good question for our case managers and front line staff.

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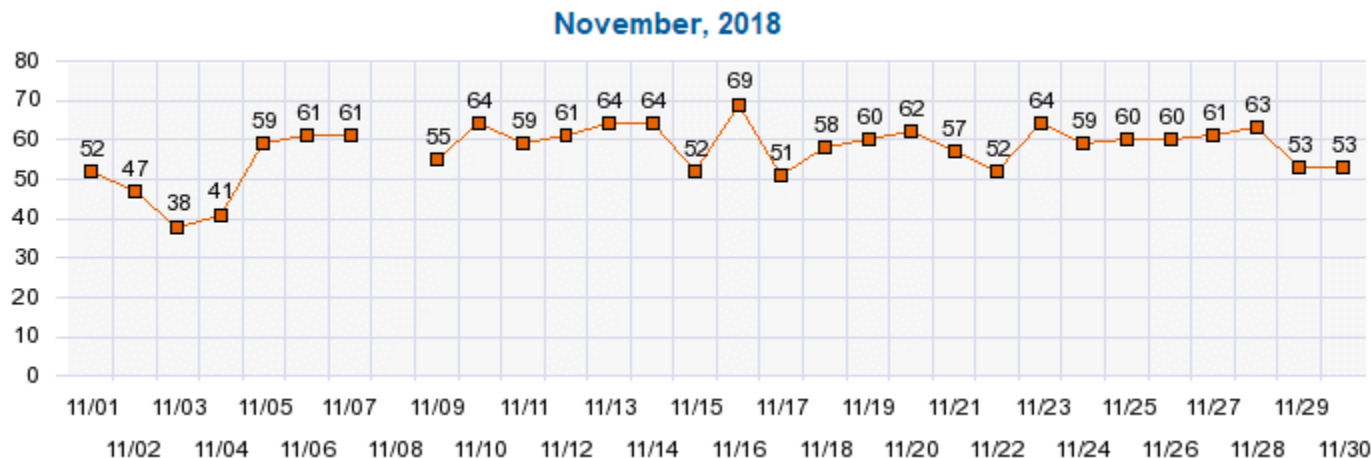
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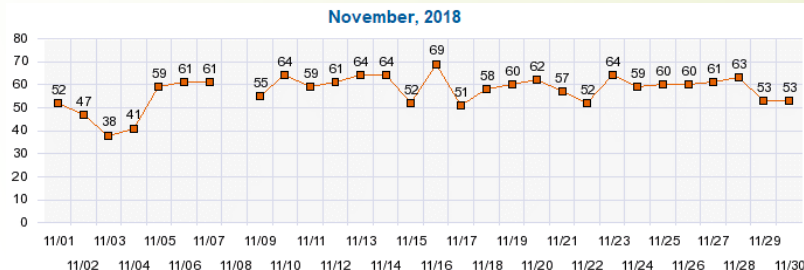
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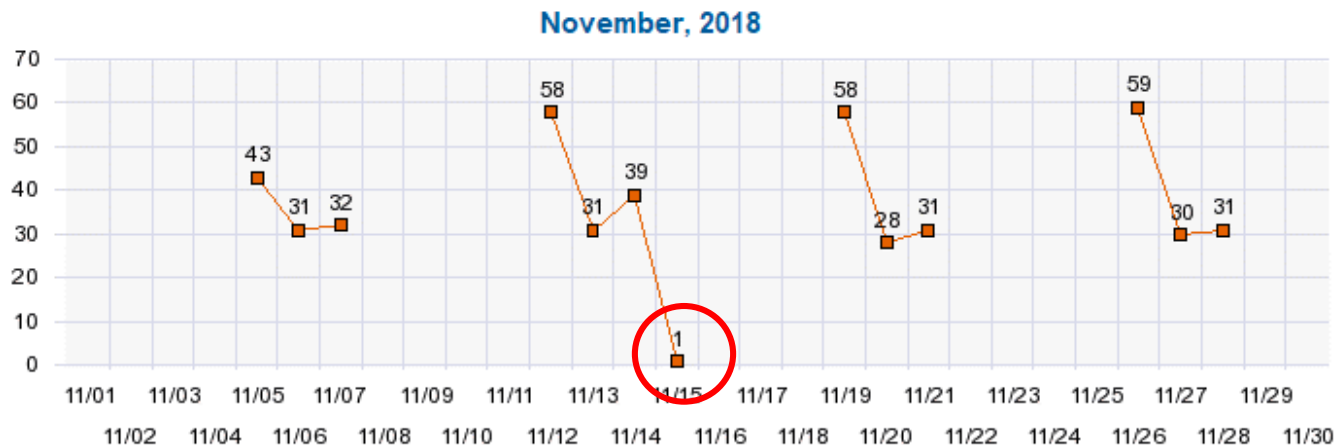


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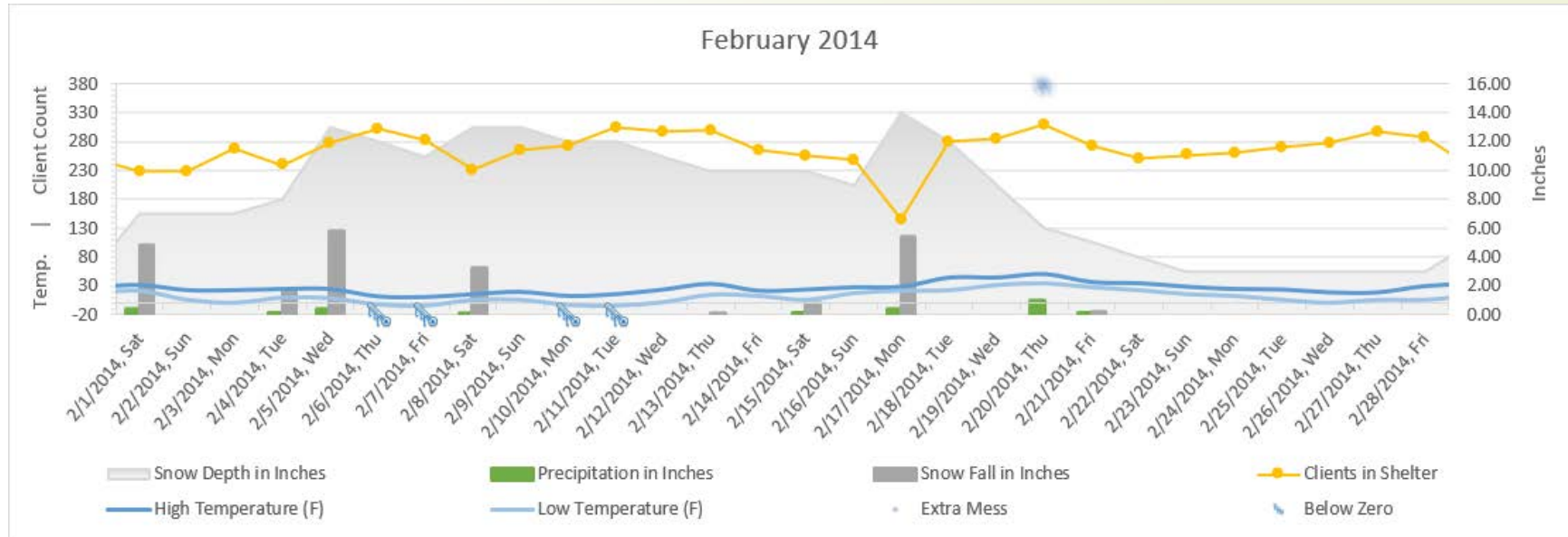
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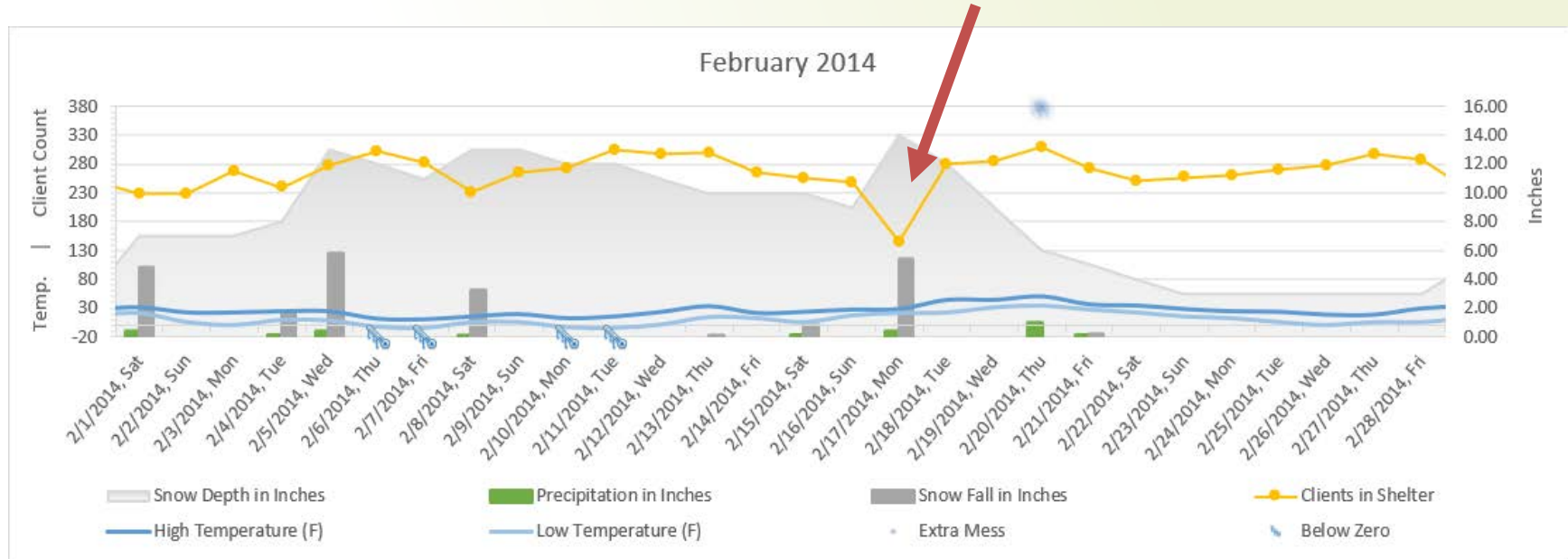
Brilliant ~~Silly~~ Line Graph meets Old Man Winter



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The Dip that Made Me a Dip

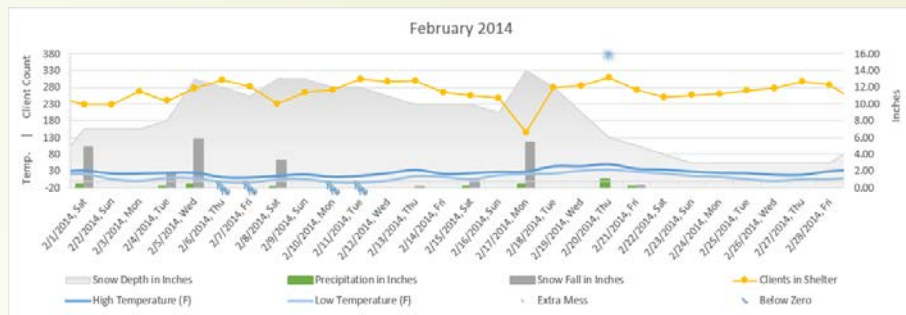


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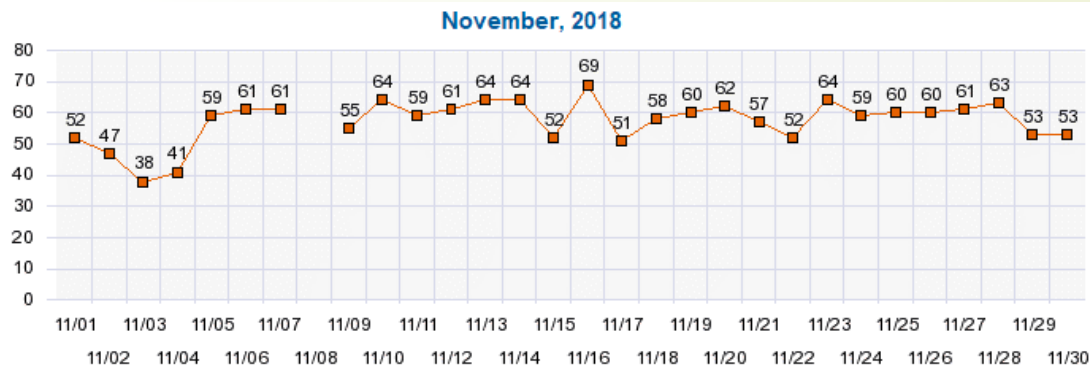
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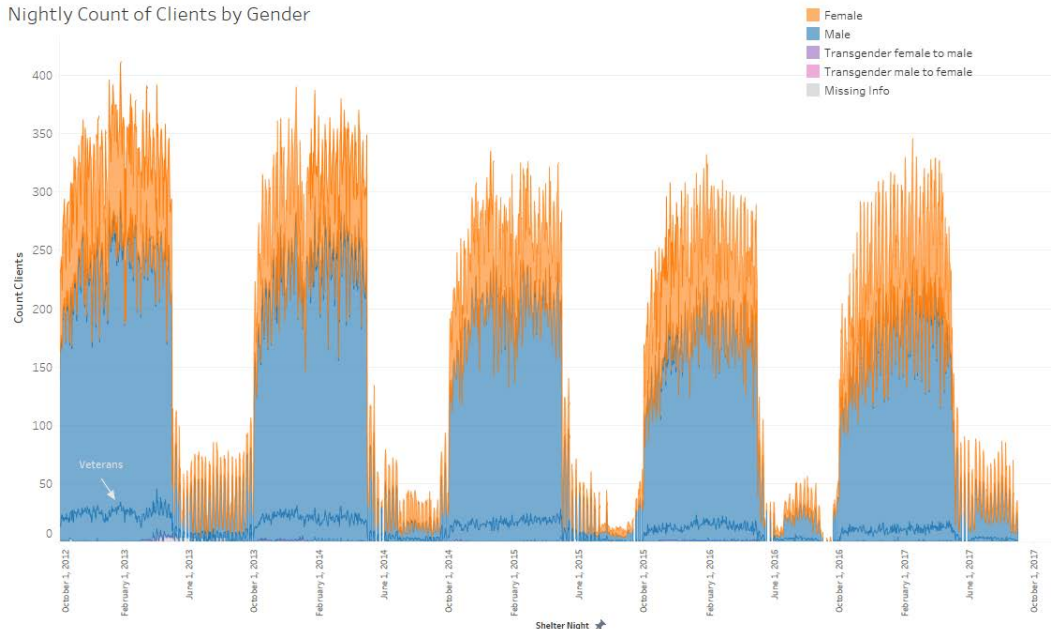


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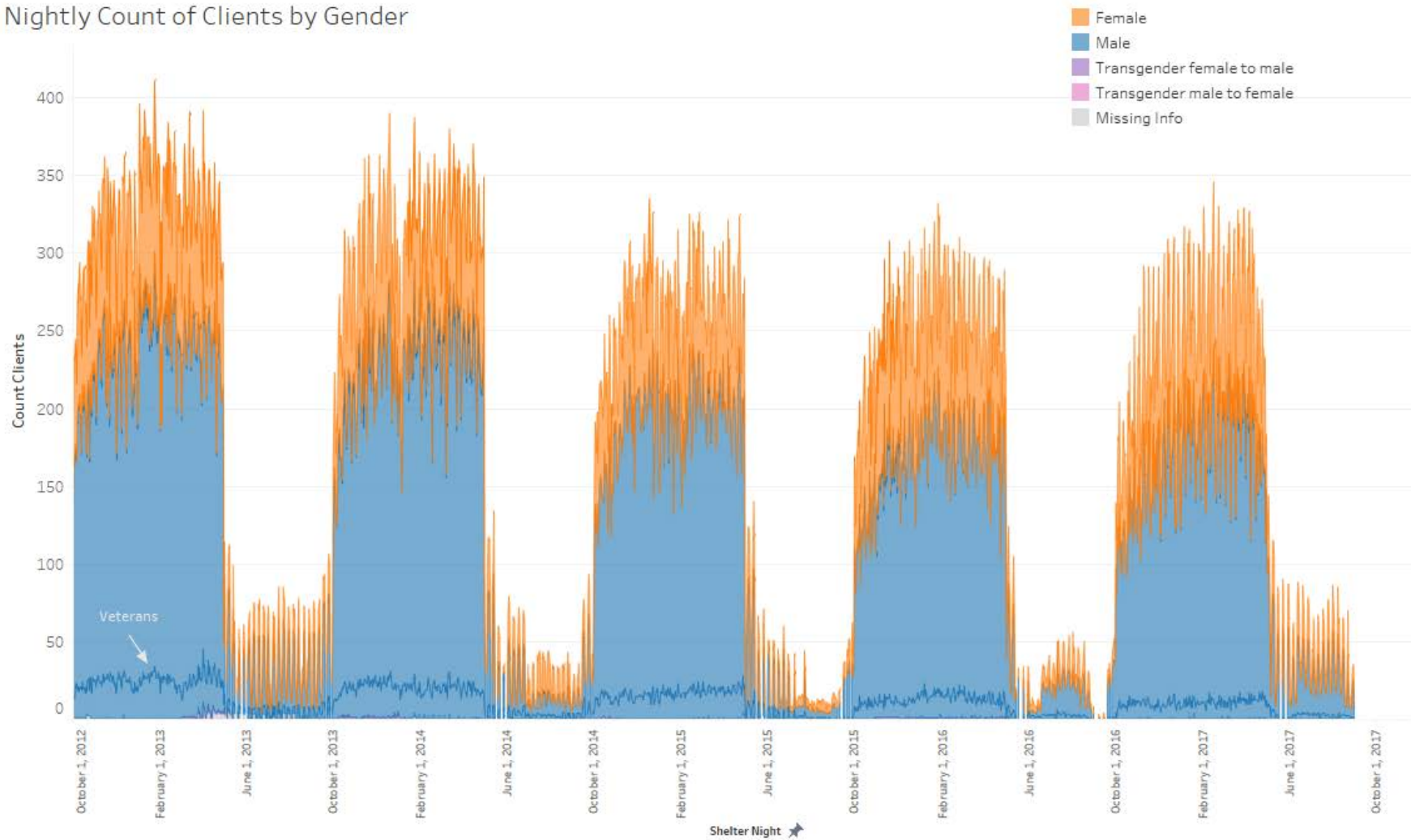
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Nightly Count of Clients by Gender



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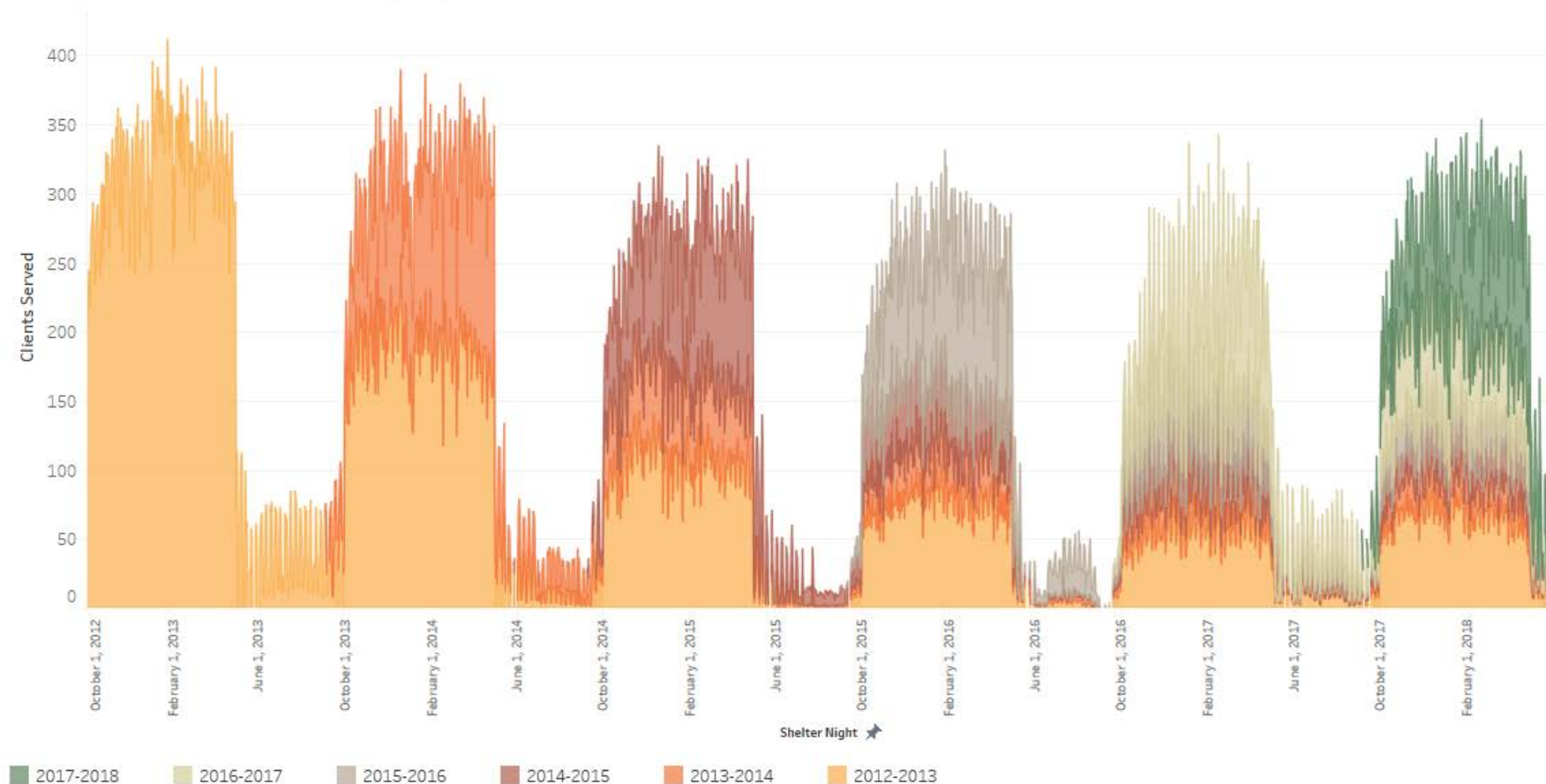
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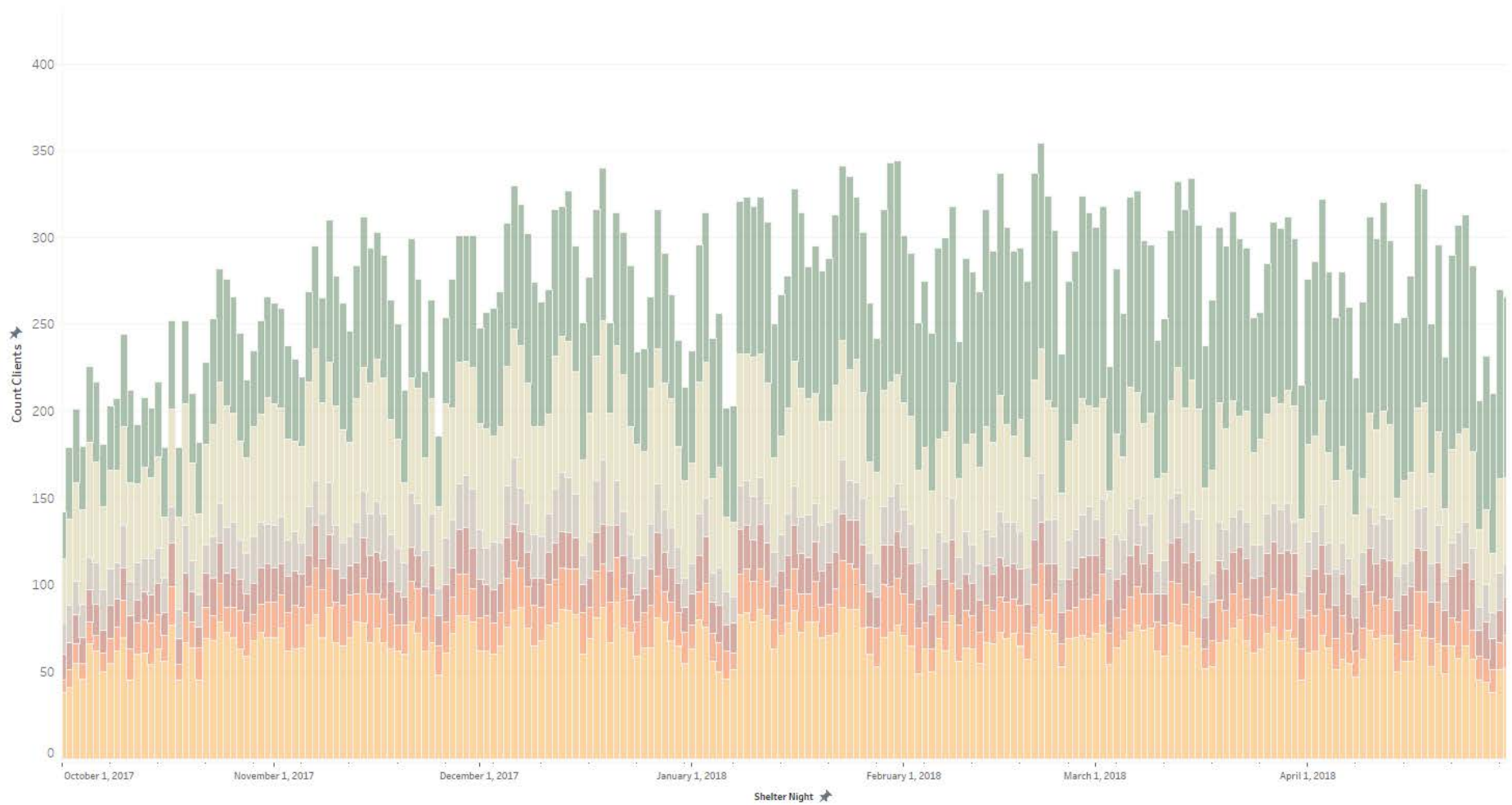
Nightly Count of Clients in Night by Night Shelters

October 1, 2012 - May 31, 2018

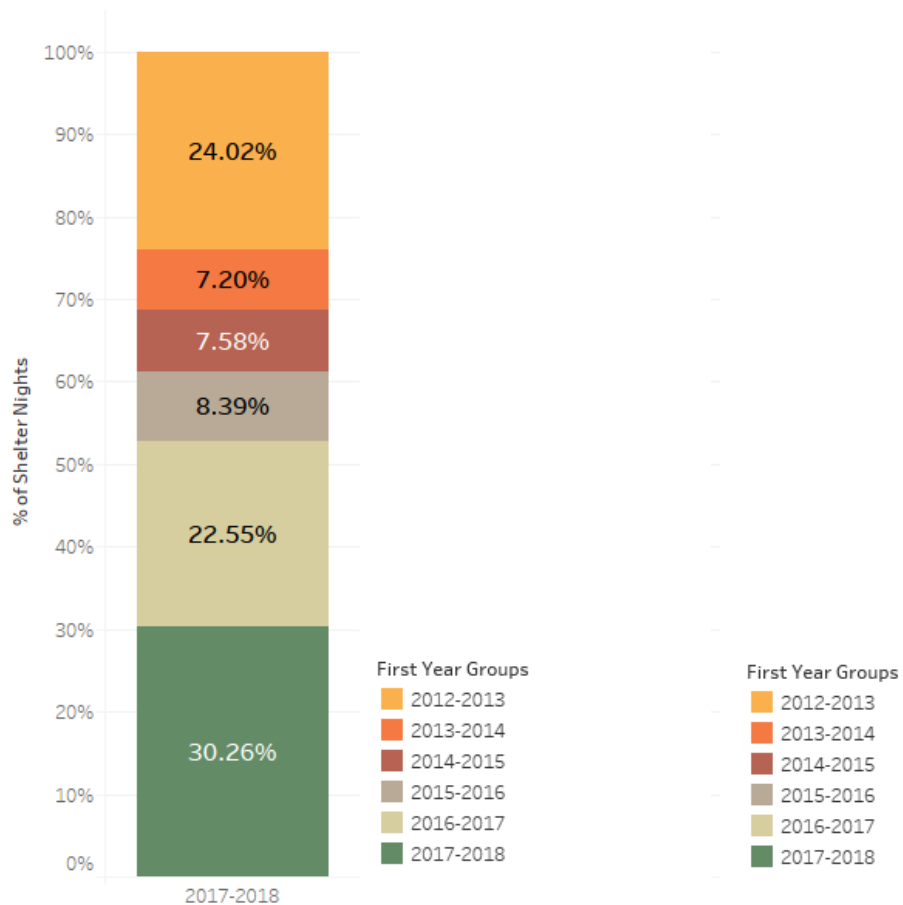
Color by Clients' First Season in Emergency Shelter



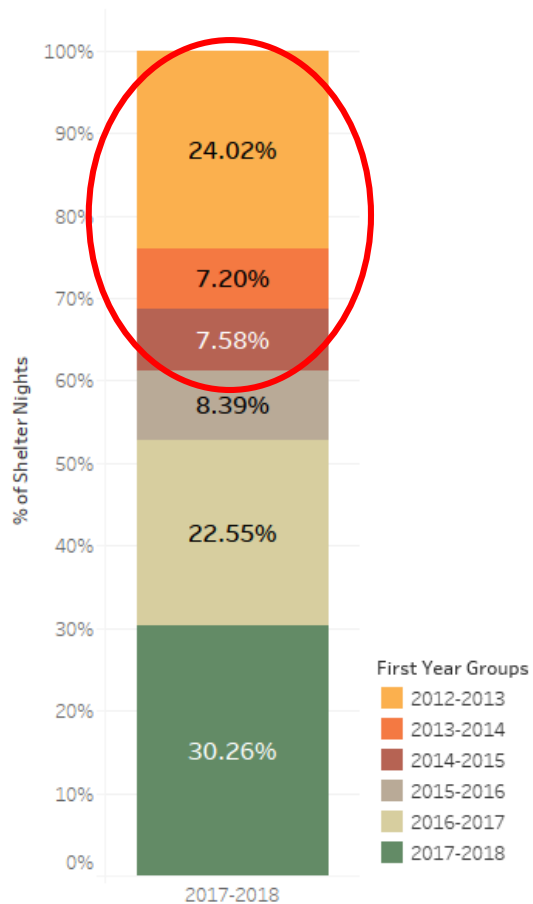
Nightly Count for 2017-2018



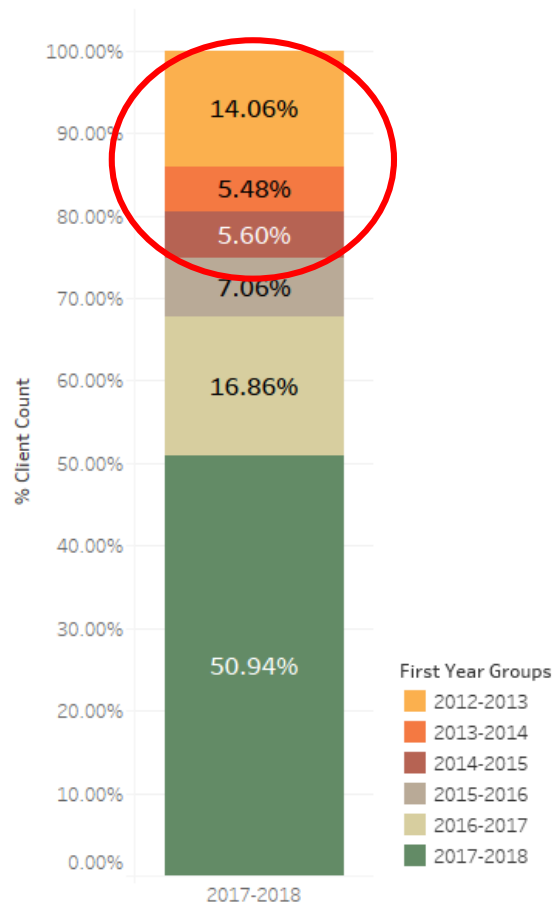
Percentage of Shelter Nights by Client's First Season (first night of shelter) (first night of shelter)



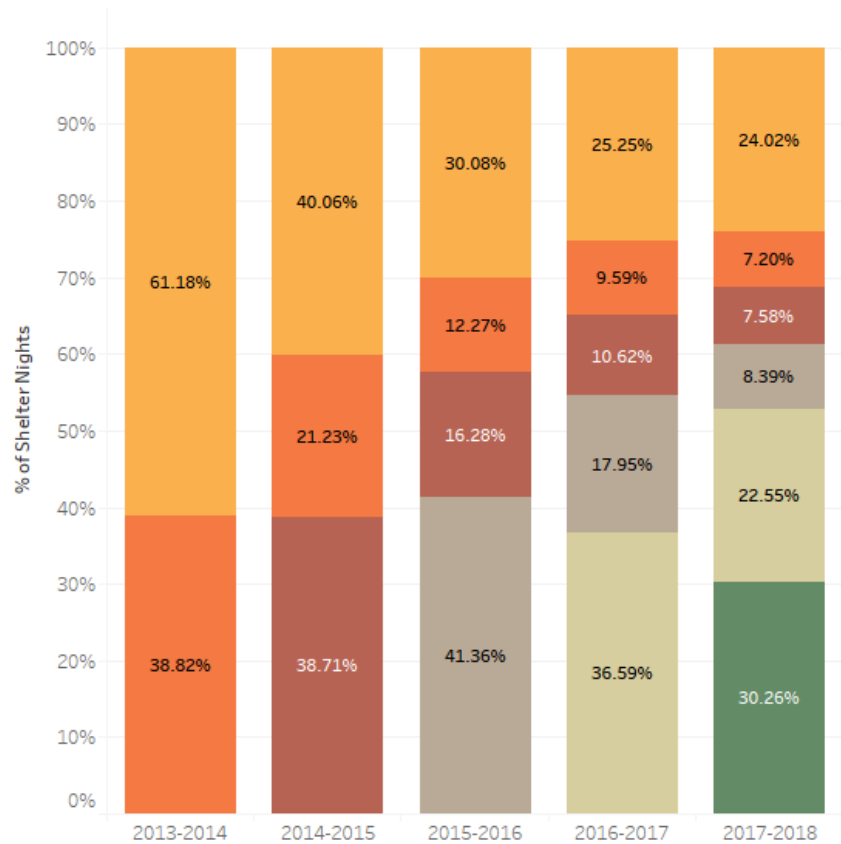
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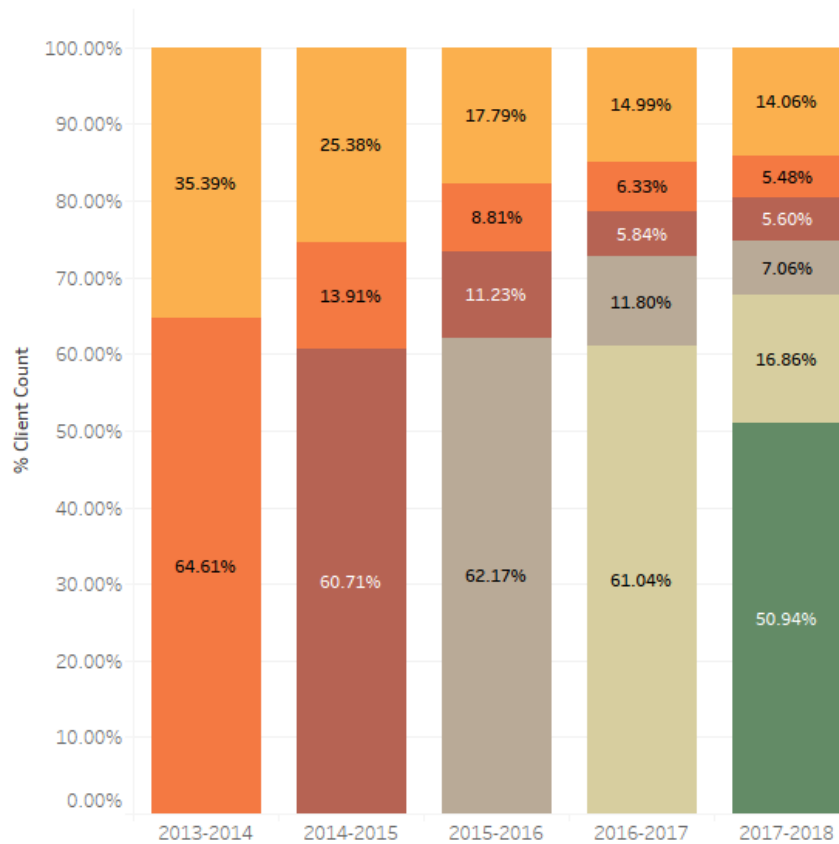
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First Year Groups

2012-2013 2013-2014 2014-2015 2015-2016 2016-2017 2017-2018

Percentage of Clients
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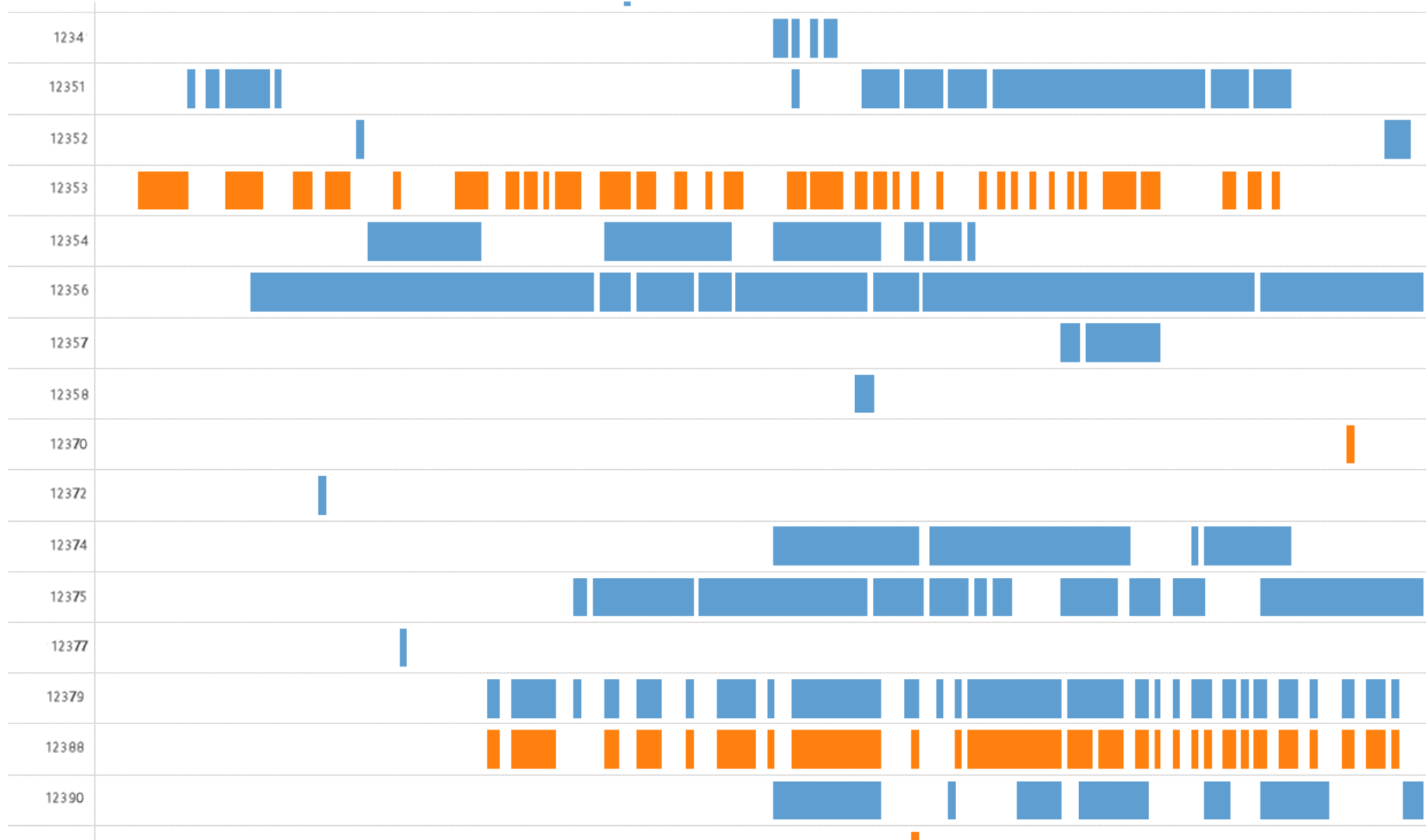
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