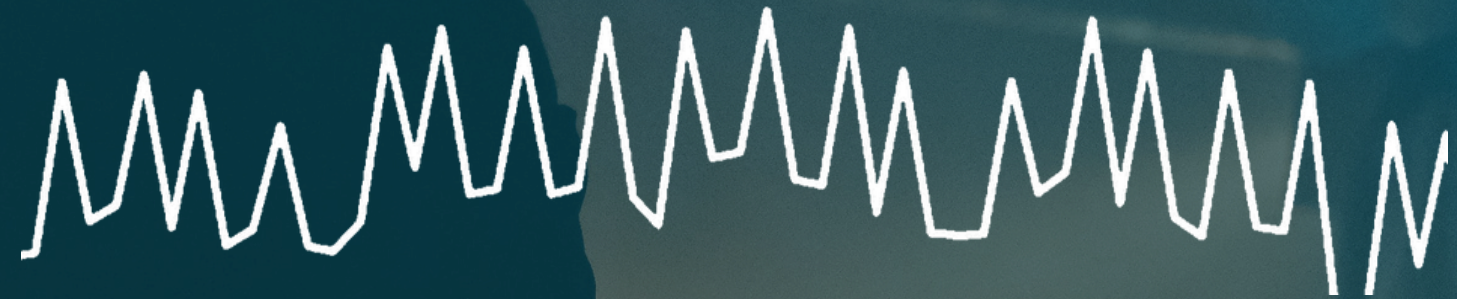


WAVES OF CHAOS

Investigating 911 Call Patterns in New York City



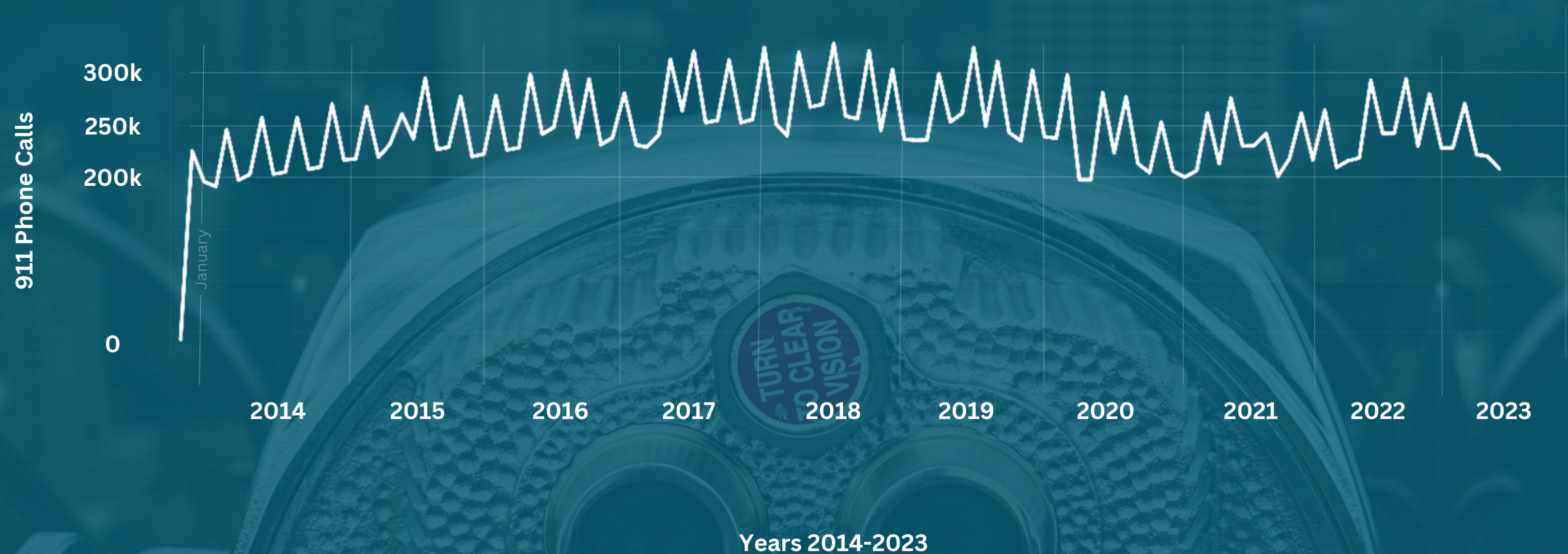
Eduardo Dodge, Amy Ewing, Xiuyuan Lu
DMGT 706 | Idea Visualization | Fall 2023 | Professor John Storey

(Photo by Faruk Tokluoğlu on Pexels, 2021)

A CLOSE LOOK AT NYC 911-CALL DATA

(New York City Art by Pompoyo, 2023)

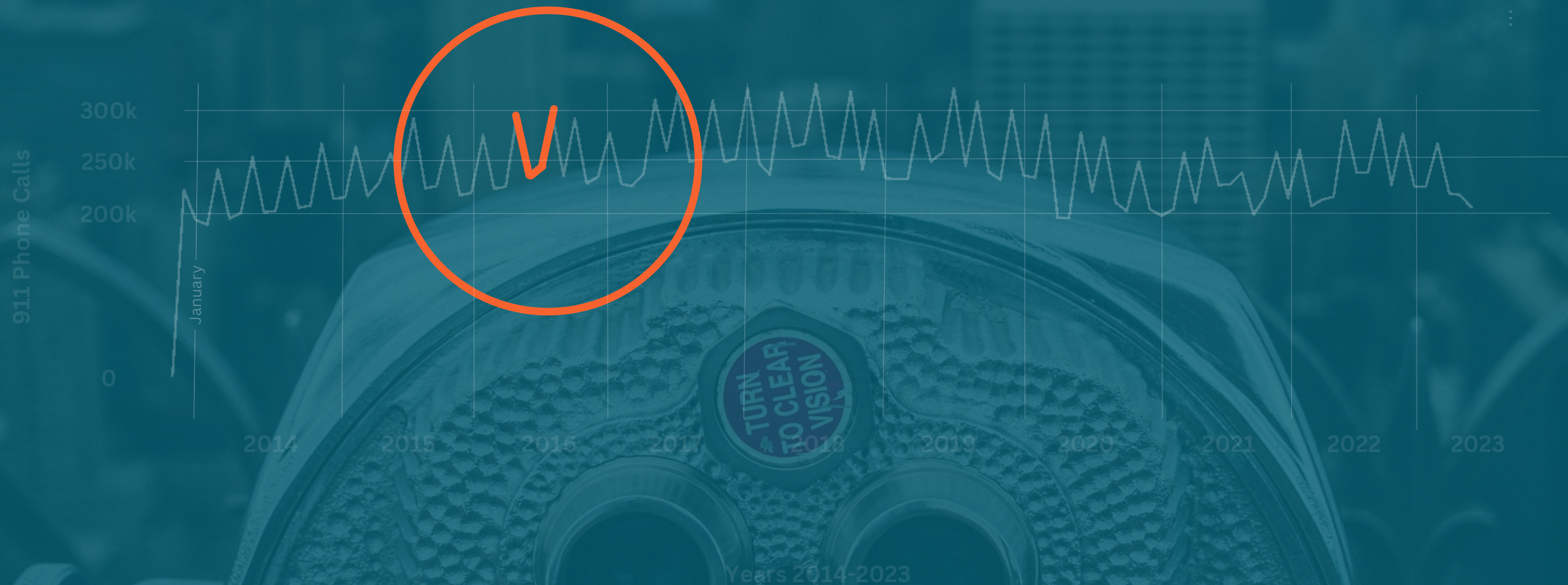
911 Calls By Year In New York City



(NYC Open Data, n.d.)

(New York City Art by Pompoyo, 2023)

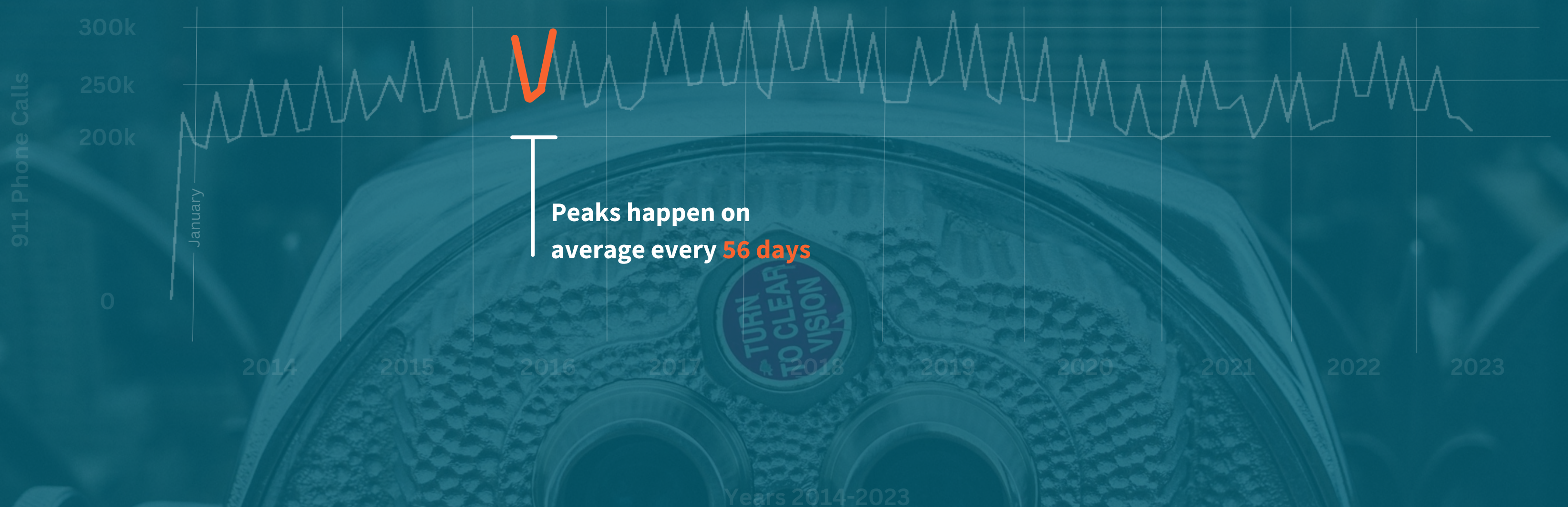
Let's talk about these dips



(NYC Open Data, n.d.)

(New York City Art by Pompoyo, 2023)

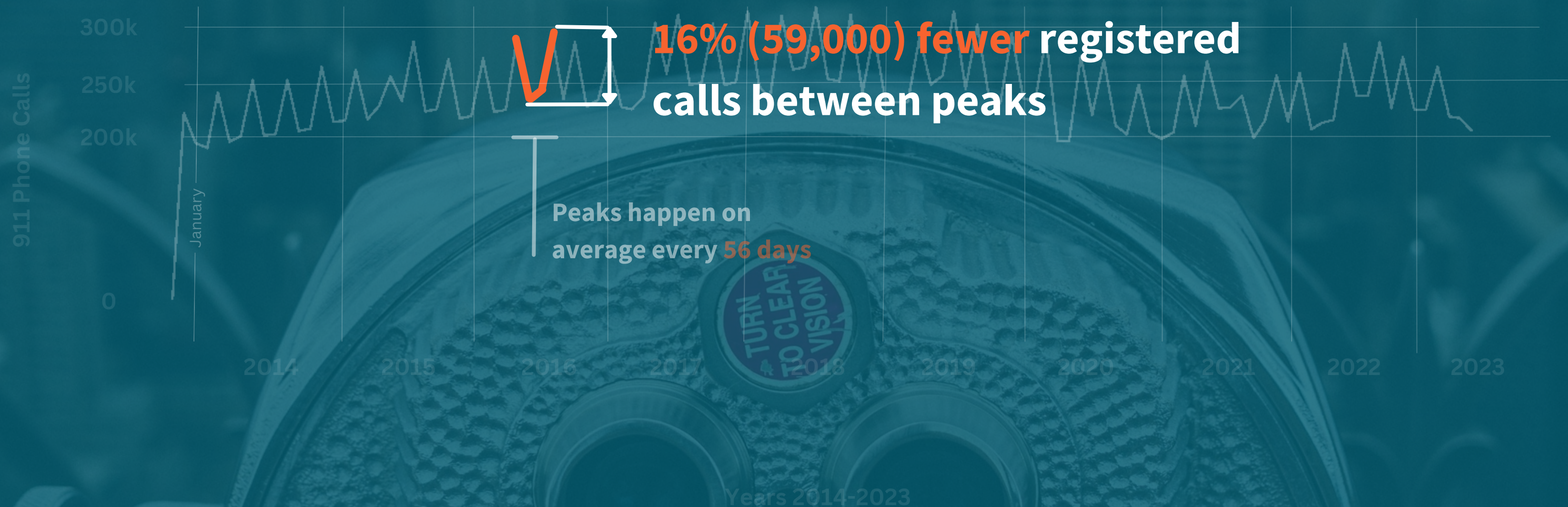
Let's talk about these dips



(NYC Open Data, n.d.)

(New York City Art by Pompoyo, 2023)

Let's talk about these dips



(NYC Open Data, n.d.)

(New York City Art by Pompoyo, 2023)

WHY?

WHY?

Seasonal?

WHY?

Seasonal?

Incidental?

WHY?

Seasonal?

Incidental?

**Health-
Related?**

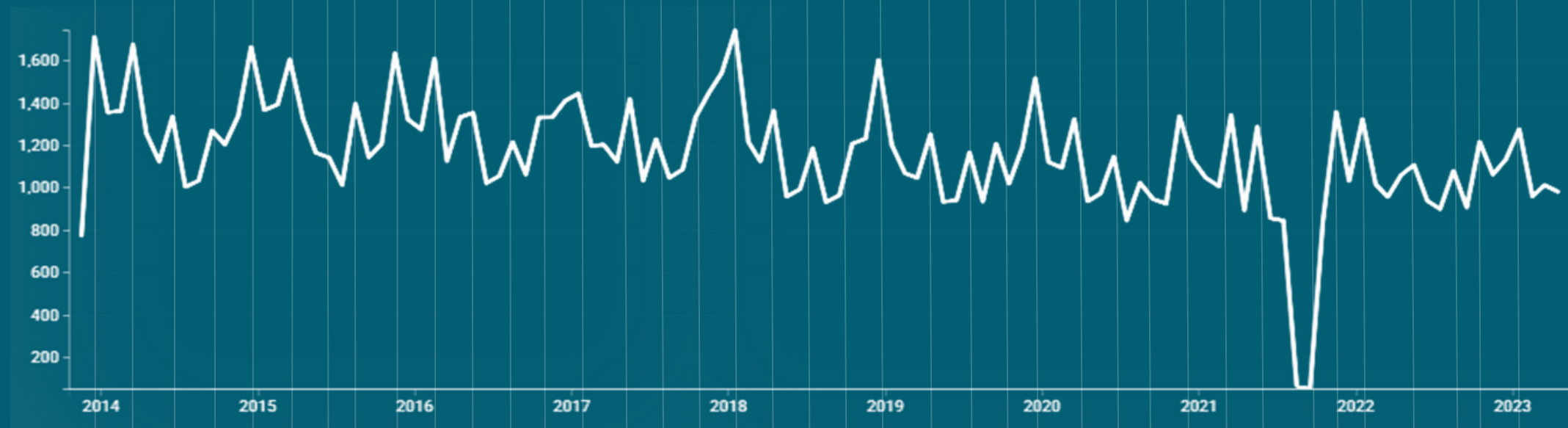
WHY?

Seasonal?

Incidental?

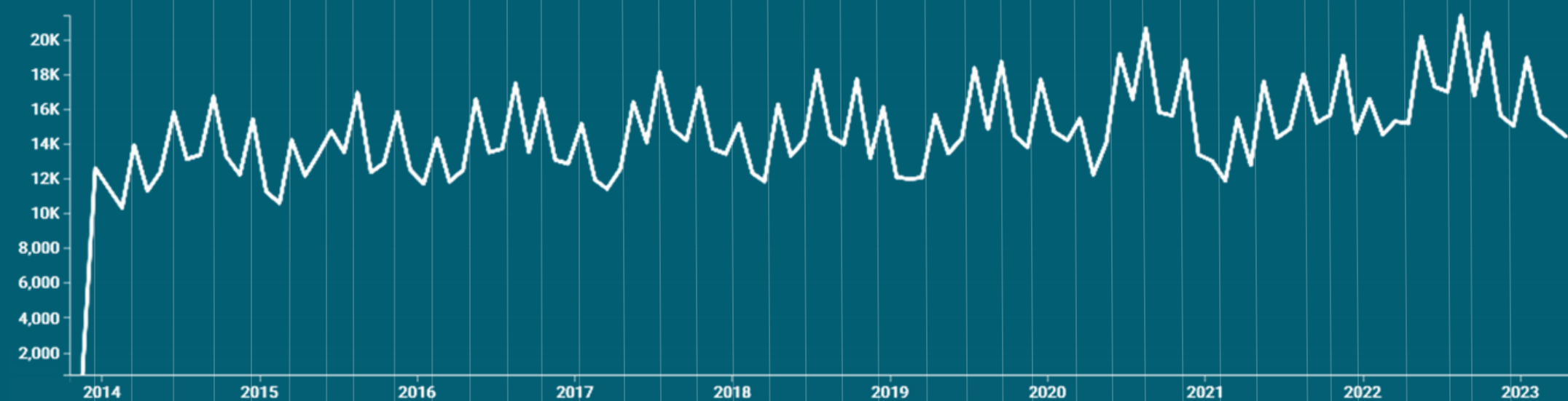
**Health-
Related?**

**Something
Else?**



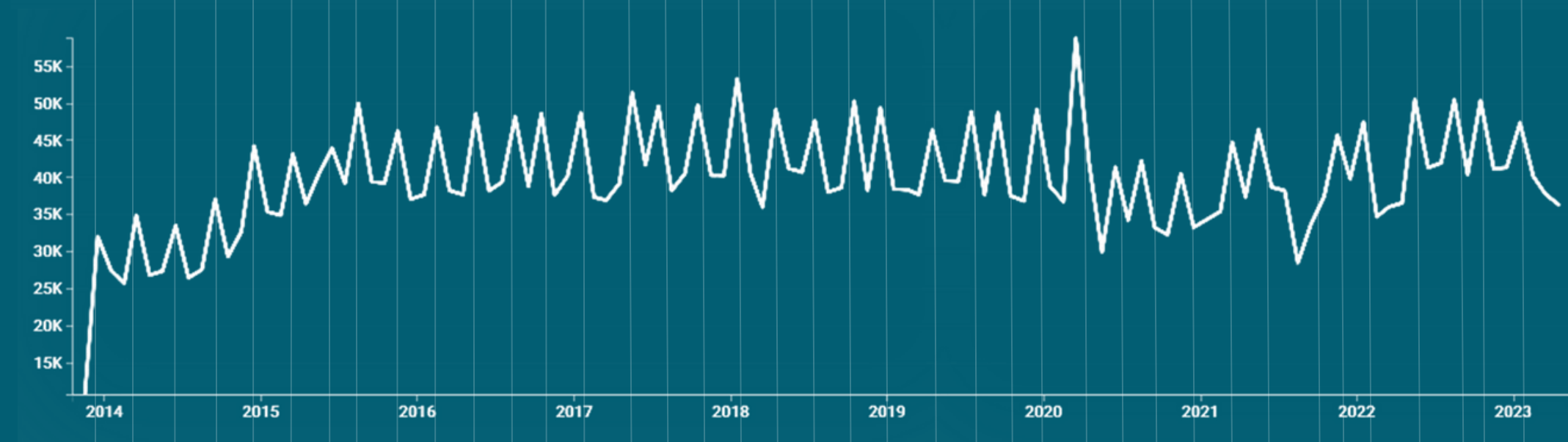
Structural Fires

average: 1189 calls
average difference: 362
% difference: 30%



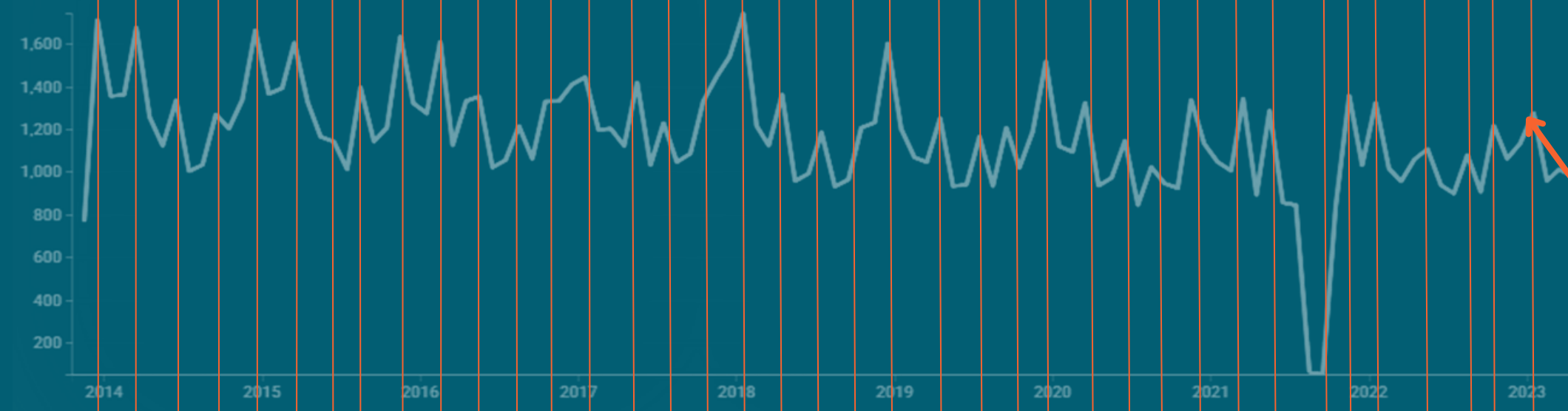
Past Crimes

average: 16,448 calls
average difference: 3809
% difference: 23%

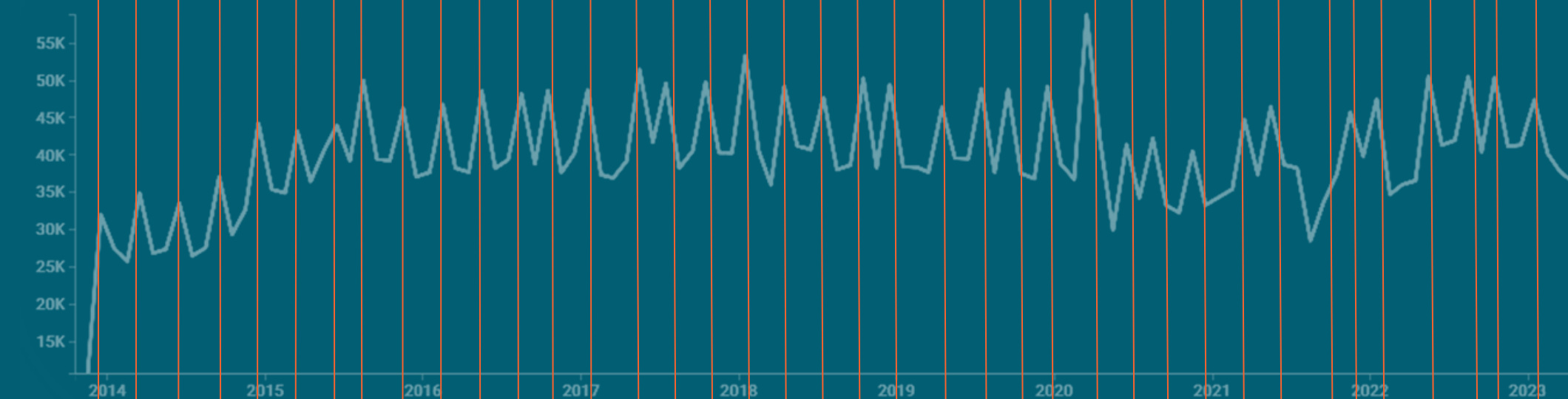
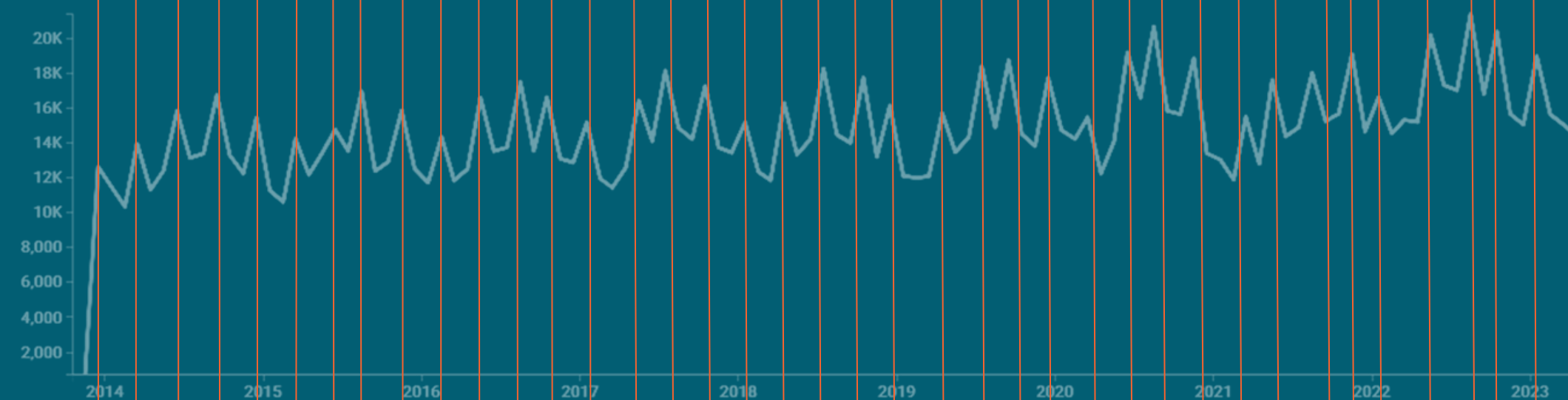


Life Threatening Medical Emergencies

average: 41,449 calls
average difference: 3809
% difference: 24%



Same dates





Structural Fires

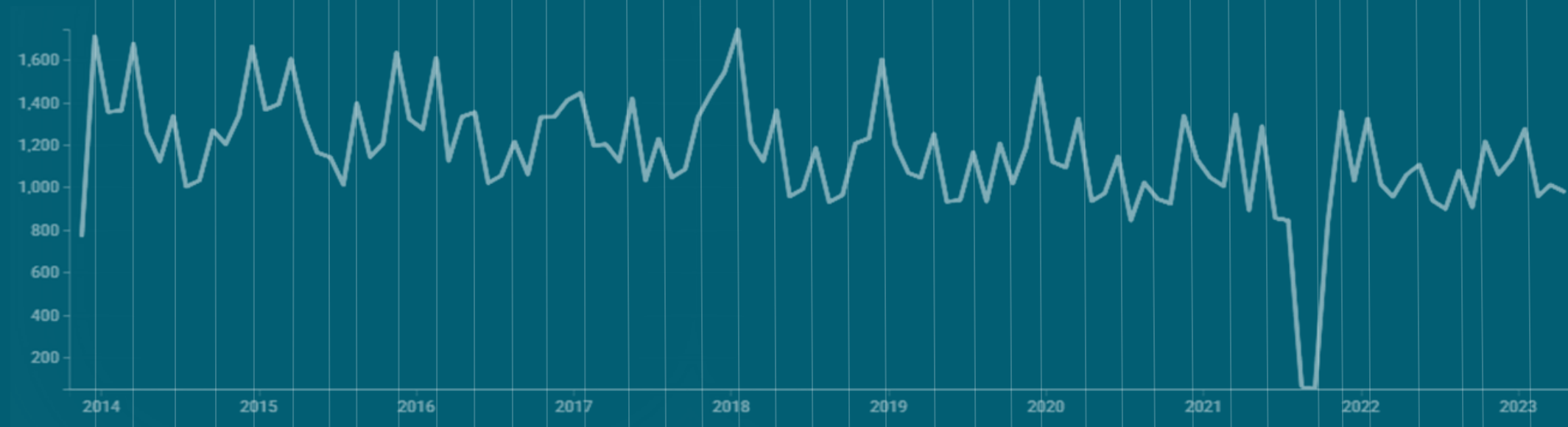
average: 1189 calls
average difference: 362
% difference: 30%

Past Crimes

average: 16,448 calls
average difference: 3809
% difference: 23%

Life Threatening Medical Emergencies

average: 41,449 calls
average difference: 3809
% difference: 24%



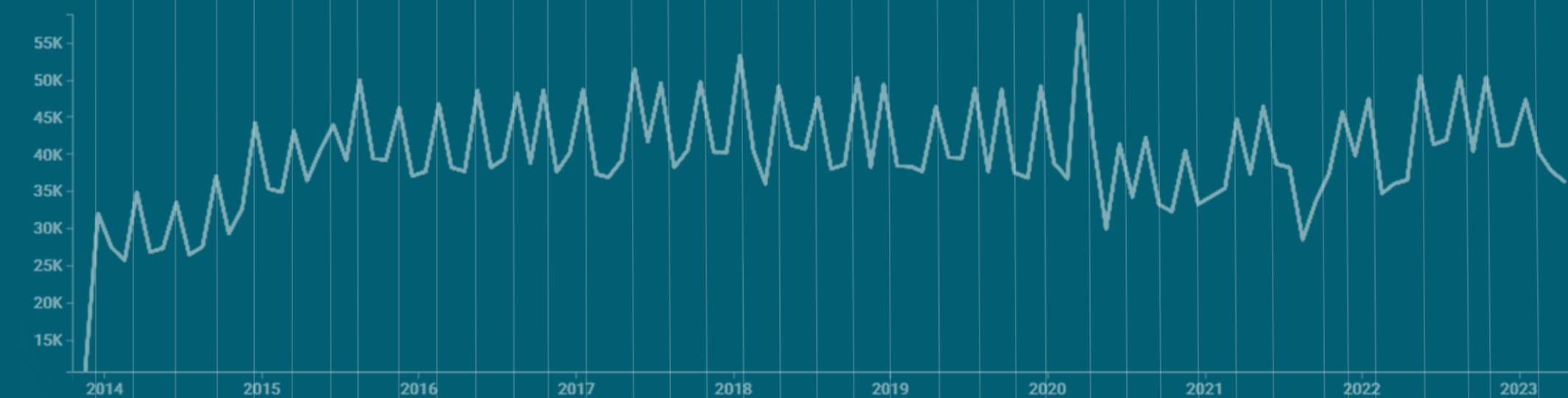
Structural Fires

average: 1189 calls
average difference: 362
% difference: 30%



Past Crimes

average: 16,448 calls
average difference: 3809
% difference: 23%



Life Threatening Medical Emergencies

average: 41,449 calls
average difference: 3809
% difference: 24%

Unrelated matters

Waves of Chaos

Our Findings

A man with a beard and mustache, wearing a headset, is shown from the chest up. He has a concerned or stressed expression, with wide eyes and a slightly open mouth. He is wearing a light blue button-down shirt. The background is blurred, showing other people in a similar setting. A semi-transparent blue overlay covers the entire image, and large white text is superimposed over the center.

911-CALL DISPATCHER BURNOUT

75% of call
call centers
in the US
report **staff
burnout** as a
major
challenge

(National Emergency Number Association, 2023)
(Canva.com, 2023)



"We take **1 million** calls **every year**. We're undervalued. Sometimes we gotta work **15 hour shifts**. No one asks if we're OK."

-Anonymous NYC 911-Call Responder

(Aponte, 2022)



911 dispatchers are among NYC's **lowest** paid workers. Base salaries for dispatchers start **\$39,000** a year and cap at **\$53,000**.



A recently-ousted
president of one of
NYC's dispatch
centers, **improperly**
used members' dues
(approximately
\$31,392) for private
car services.

(Aponte, 2022)
(Canva.com, 2023)



82% of call
centers are
regularly
understaffed

(National Emergency Number Association, 2023)
(Canva.com, 2023)

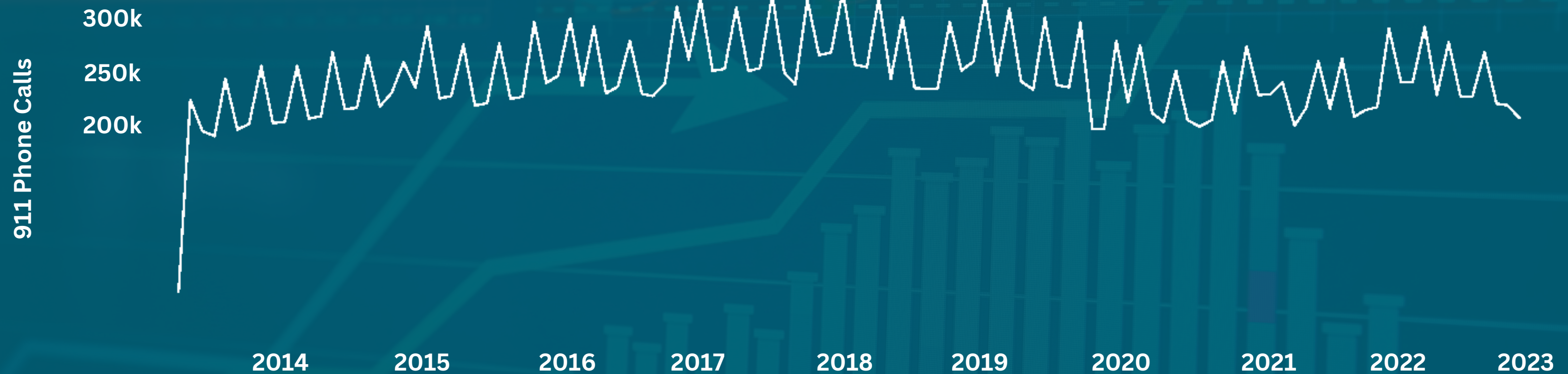




COULD...

Mismanagement, poor wages and overwork be causing staff-shortages and therefore reducing the number of calls?

911 Dispatcher burnout may lead to over **1000 unanswered calls every day** in NYC



(NYC Open Data, n.d.)

(New York City Art by Pompoyo, 2023)

Solutions

Technology
like text-to-
911



Solutions

**Remote Work
supporting healthy
work/life ballance**



Solutions

Mental health care



FOCUS... next steps



(New York City Art by Pompoyo, 2023)

REFERENCES

911 End-to-End Data. (n.d.). NYC Open Data. Retrieved November 3, 2023, from <https://data.cityofnewyork.us/Public-Safety/911-End-to-End-Data/t7p9-n9dy>

Ansari, S., Du, H., Naghdy, F., & Sattar, A. (2023). Impact of Post-Covid-19 on driver behaviour: A perspective towards pandemic-sustained transportation. *Journal of Transport & Health*, 28, 101563. <https://doi.org/10.1016/j.jth.2022.101563>

Aponte, C. I. (2022, October 6). 911 Dispatchers Call for Exodus From Scandal-Tainted Clerical Union. *THE CITY - NYC News*. <http://www.thecity.nyc/2022/10/06/911-dispatchers-dc37-local-1549-first-responders/>

Data Access—Statewide Planning and Research Cooperative System. (n.d.). Retrieved October 30, 2023, from <https://www.health.ny.gov/statistics/sparcs/access/>

Heart Disease and Stroke Prevention. (n.d.). Retrieved October 29, 2023, from https://www.health.ny.gov/diseases/cardiovascular/heart_disease/

Lawson, K. (2023, August 15). 911 callers in NYC at risk, according to operators claiming burnout from unfair OT: Report. *Silive*. <https://www.silive.com/crime-safety/2023/08/911-callers-in-nyc-at-risk-according-to-operators-claiming-burnout-from-unfair-ot-report.html>

McDermott, Kimberly W. & Marc Roemer, M.S. (2021). *Most Frequent Principal Diagnoses for Inpatient Stays in U.S. Hospitals, 2018*.

NENA & Carbyne. (2023). *Pulse of 9-1-1 [Survey; PDF]*. https://cdn.ymaws.com/www.nena.org/resource/resmgr/docs/2023_Carbyne_and_NENA_The_Pu.pdf

New York City Art by pompoyo. (2023, March 19). *Society6*. <https://society6.com/art/new-york-city7215691>

NYC Open Data. (n.d.). Retrieved October 30, 2023, from <https://data.cityofnewyork.us/d/t7p9-n9dy/visualization>

REFERENCES

Photo by Faruk Tokluoğlu on Pexels. (2021, January 15). Pexels. <https://www.pexels.com/photo/group-of-police-officer-and-investigators-work-at-crime-scene-7101498/>

Shueh, J. (2017, May 24). NYC's new 911 center has quiet rooms for decompressing after stressful calls. StateScoop. <https://statescoop.com/nycs-new-911-center-has-quiet-rooms-for-decompressing-after-stressful-calls/>

State of New York | Open Data Health | State of New York. (n.d.). New York State Department of Health | Health Data NY. Retrieved October 30, 2023, from <https://health.data.ny.gov/>

Telecommunicator Reclassification—National Emergency Number Association. (n.d.). Retrieved November 1, 2023, from <https://www.nena.org/page/reclassification>