ARS
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Report of Analysis of 911 Calls for Service to Inform Pre-Arrest Diversion and Other Expansion Efforts

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Introduction

Applied Research Services, Inc. (ARS) was contracted by the Atlanta/Fulton County Pre-Arrest Diversion (PAD) Initiative to conduct an in-depth evaluation of 911 calls for service data to inform relevant stakeholders such as the Atlanta City Council and Atlanta Police Department (APD) regarding plans for PAD expansion to all APD zones. The work includes efforts to identify, analyze and subsequently understand the continuum of calls diverted or capable of being diverted to non-law enforcement community providers such as the Georgia Crisis & Access Line, the Grady Behavioral Health co-responder teams, and other potential community partners. A third objective is to examine 911 calls to ascertain the suitability that these calls could be routed through the 311 system instead of the 911 system.

History and Description of 911 Calls for Service

Despite its seeming ubiquity, the 911 system has only been in existence for a little over 50 years. In 1957, the International Association of Fire Chiefs argued for a single, nationwide telephone number to report fires. A decade later the Commission on Law Enforcement and Administration requested that system be extended to call for police services. It was one year later in 1968 that AT&T (then the single provider for almost all phone service in the United States and Canada, referred to as "Ma Bell") designated 911 as the nationwide emergency number. As the percentage and distribution of households with telephones grew, so did widespread support of making 911 calls the universal way to report emergencies of all types. Subsequently, the US Congress formally adopted it in 1999 as the official national emergency number which has since been fully integrated into our culture.

As a side effect of its rapid popularity, localized application gave way to decentralized response and records management. Specifically, each community developed their own 911 system that exhibited little interoperability across agencies and jurisdictions. Iterative improvements to the relatively rudimentary original 911 system have resulted in the Enhanced 911 (E911) most commonly used today. Its features include automatic detection of the caller's location, automatic routing of calls, and call recording; however, data remain siloed within agencies even for nonemergent service requests. E911 system are also outfitted with Computer-Aided Dispatch (CAD) software, which permit police departments to better assign and allocate resources and support to call locations (Neusteter et al., 2019). The biggest advantage of CAD assimilation is that it allows for data to be pulled from and feed into mobile terminals.

At present there are over 6,000 call centers in the United States, referred to as Public Service Answering Points (PSAPs). PSAPs are locally operated and managed, and each PSAP operates independently from the others. Therefore, they cannot transfer calls between PSAPs. While this arrangement fostered the rapid development and spread of the 911 system throughout the U.S., it has also made it very difficult to study call patterns and trends across PSAPs.

Another significant challenge in emergency call data has been the ubiquity of cell of phones, which of course was not anticipated when the 911 system was developed and expanded to capture the caller's location in the 1970s. In 2016, 80% of 911 calls were made via cell phone, and that number has only

increased in the intervening years. Unlike land lines linked to a physical location, cell phone calls only ping the nearest network tower, leaving the precise location rather ambiguous. This is especially problematic for 911 hang-up calls, the majority of which result in an officer being dispatched to the presumed call location.

Similarly, the increasing use of Voice over Internet Protocol (VoIP) calling presents challenges as well, which may not be adequately addressed until wider adoption and application of Next Generation 911 (NG911). NG911, a digital system, is being developed in response to these and other anticipated challenges. NG911 provides for voice, interactive video, texting, and addresses accessibility and location issues. The National 911 Program (National 911 Progress Report, November 2019; 911.gov) was initiated as a means of providing federal leadership and coordination to expand and promote such optimal 911 services. The program is administrated by the Office of Emergency Medical Services at the National Highway Traffic Safety Administration (NHTSA) within the U.S. Department of Transportation (USDOT).

National 911 develops, collects, and disseminates information regarding most aspects of the implementation of 911 services nationwide. Among these efforts is the National 911 Profile Database, which is populated annually via completion of an Internet-based survey that collects 53 data elements that together describe responding states' 911 operations, policies, and protocols, as well as the progress each state is making towards full implementation of NG911. The November 2019 National 911 Report indicates that 45 states, one territory and the District of Columbia submitted data and completed the most recent survey. Survey results indicate that states are making good progress towards implementation of NG911, in that many states have already implemented aspects of NG911, including 33 states having implemented text-to-911 messaging.

What Happens When Someone Calls 911?

The entire process begins of course when a caller dials 911, increasingly using a cell phone rather than a land line. The call is connected to the PSAP nearest to the physical location of the landline or network tower to the caller. The call-taker (i.e., whomever answers the call or dispatcher) gathers information about the incident, simultaneously entering it into the system that identifies the caller's location and categorizes the services needed. The series of questions asked by the call-taker is designed to note the following:

1. Identify the location of the emergency (automated with E911)
2. Triage the emergency
3. Identify the most appropriate services to dispatch to the scene
4. Collect pertinent information for the emergency responders

While the above represent a baseline dataset, the National Emergency Number Association (NENA) recommends the following minimal dataset for call takers:

1. The exact location or address of the incident
2. A valid call-back number
3. The type of emergency

4. The time of the event or situation
5. The presence of any known hazards
6. The identifies and locations of those involved

The call is then moved to dispatch, which may be handled by a separate dispatcher or may also be the call-taker; this varies by jurisdiction. The dispatcher uses the information gathered by the call-taker to assign and dispatch the emergency responders to the caller's location. Dispatchers are responsible for:

1. Deciding what type of responders to request and how many
2. Indicating the priority level for the emergency and entering that information into CAD, using codes specified by the jurisdiction

Once dispatched, the responders arrive on scene, assess the situation, and act accordingly. When the situation has been dealt with appropriately, the responder completes a report, compares their assessment of the situation to that of the call-taker, and notes specific times for all activities associated with the call.

Review of Relevant Literature

The Vera Institute of Justice (www.vera.org), a large national nonprofit agency focusing on criminal justice research and policy analysis recently published a review of the 911 system specifically as it relates to law enforcement (Neusteter, Mapolski, Khogali, and O'Toole, *The 911 Call Processing System: A Review of the Literature as it Relates to Policing*. New York: Vera Institute of Justice, 2019). The report provides a description of the 911 system, a summary of the related research, and a series of proscriptions for moving forward. The review begins with a note from the primary author which states in part:

> "Police spend an inordinate amount of time responding to 911 calls for service, even though most of these calls are unrelated to crimes in progress. Many are for quality-of-life issues like noise, blocked driveways, or public intoxication. Others are for problems like drug abuse, homelessness, or mental health crises that would be better resolved with community-based treatment or other resources—not a criminal justice response…There is a pressing need for data-informed strategies to identify 911 calls that present a true public safety emergency and require an immediate police response, while responding to other calls in ways that do not tax limited policing resources and promote better outcomes for the people involved and the communities where they reside…A safer, stronger, fairer justice system hinges on our ability to deploy enforcement only when necessary. Developing a deep systemic understanding of 911 calls, responses, processes, outcomes, and opportunities for improvement is a key component of this process" (Neusteter et al., 2019; From the Director – no page number).

The authors of the Vera report identify two primary approaches taken in existing research on 911 systems: research on a relatively simple set of metrics such as call volume and call and response time; and more complex and in-depth studies that explore factors such as caller behavior, call type patterns over time within a specific jurisdiction, and factors that can impact response type and time to respond.

Rigorous, systematic research on 911 systems has necessarily been hampered by characteristics of 911 systems such as:

1. A lack of standardization of call type categories across jurisdictions and time within jurisdictions
2. Jurisdictional differences in areas such as call protocols, response codes, and agency policies
3. Lack of access to data
4. While data availability is beginning to appear, it is limited by the very small number of agencies participating in making their data publicly available

The authors of the Vera report conducted a broad search of the literature, including 35 studies in their final sample that fell into the two broad categories noted above – studies of relatively simple metrics that can reliably be compared across jurisdictions and studies that went into significantly greater detail on call types, locations, and characteristics of those locations (e.g., data at the neighborhood level). The results of their review find that only a minority of citizen calls to 911 involve serious crimes (typically less than one in five), with the remainder of calls concerning quality of life issues. The authors describe how better collection and more fine-grained analysis of data can inform police practices as well as provide critical information regarding how to best allocate and distribute police resources.

One study in Baltimore focusing on Maryland's implementation of 311 service described ways capturing more data about how the 911 and 311 lines were being utilized could assist other departments in implementing and managing call lines that would ultimately lessen the burden placed on the 911 system. Another study in Houston, Texas found that the city experienced a doubling of mental health-related calls for service between 2007 and 2014. Correctly characterizing the issue as a specific increase in call type as opposed to simply call volume led to the establishment of the 9-1-1 Crisis Call Diversion (CCD) program. This enhanced approach involves dispatchers identifying and immediately referring nonemergency mental health-related calls to a phone counselor. The result has been a savings of hundreds of thousands of dollars, as well as the provision of appropriate mental health rather than law enforcement response to crisis situations. For example, 2017 saw CCD counselors handle 7,264 calls for service, of which 30% resulted in diversions from police (Neusteter et al., 2019).

In the year since the Vera report was released, several additional studies have been published, including research on of calls for service in Austin, Texas (Horwitz, B. and Asher, J., July 2020. *Assessment of Austin Police Department Calls for Service*. AH Datalytics). Analysis of just over 18 months of Austin 911 call data (approximately one million records) resulted in categorization of seven types of service requests. Those categories are as follows, with the percentage of total calls and percentage of officer's time indicated in parentheses:

1. Medical - including mental health, suicide, and death incidents (1.3% of total calls and 2.5% of officer time spent on calls)
2. Responsive - incidents not initiated by the officer, such as assisting other agencies and burglar alarms (40.2% of total calls and 26.4% of officer time spent on calls)

3. Non-UCR crime - all criminal activities other than FBI Uniform Crime Reporting (UCR) Part I categories of criminal homicide, rape, robbery, aggravated assault, theft, auto theft, and burglary (16.9% of total calls and 23.9% of officer time spent on calls)
4. Proactive - initiated by the officer and/or that take place during discretionary time (13.7% of total calls and 16.7% of officer time spent on calls)
5. Property crime - auto theft, burglary, theft as defined by the FBI UCR (4.0% of total calls and 6.5% of officer time spent on calls)
6. Traffic - responses to traffic accidents, directing traffic, and enforcing traffic laws other than DUI (23.2% of total calls and 21.1% of officer time spent on calls)
7. Violent crime - criminal homicide, rape, robbery, aggravated assault as defined by the FBI UCR (0.6% of total; of those, over 85% were for robbery and assault/battery and 2.8% of officer time spent on calls)

Among other recommendations, the authors suggested call codes should be reduced as the top 10% of call codes represented 92% of all calls for service. The authors recommended that potential non-law enforcement responses to calls involving mental health crises be identified and implemented. A separate dataset was then used to further examine these types of calls, and analyses showed that approximately 8% of all calls for service (in the first six months of 2020) involved a mental health issue, which were largely undetectable as such in the larger 911 dataset. Approximately two-thirds of those mental health-related calls stemmed from disturbances, trespassing, and welfare checks. The authors surmise that efforts should be made to more accurately detect which types of mental health-related situations could be diverted from law enforcement response, thus leaving officers available to deal with more serious crimes as well as increasing the well-being of persons experiencing mental health issues.

Another recently published study that focused on policing (Asher, J. and Horwitz, B. June 19, 2020. *How Do the Police Actually Spend Their Time?* The New York Times) found that the proportion of time law enforcement spends handling violent crime in New York City to be only 4%, which the authors characterized as “very small”. Almost identical percentages were found in New Orleans (4%), Montgomery County, Maryland (4.1%), and Sacramento, California (3.7%). Substantially more officer time is dedicated to addressing issues regarding homelessness, mental illness, substance abuse, and similar issues. The authors opine that other agencies may be better suited to addressing these latter concerns, in effect “unbundling” law enforcement.

Similar findings and conclusions have arisen out of calls for service research using larger datasets, time periods, and among more crime-ridden cities. For instance, a study of approximately 18 million calls for service over a ten-year span was conducted in Los Angeles (Rubin, J. and Poston, B. July 5, 2020. *LAPD responds to a million 911 calls a year, but relatively few for violent crimes*. Los Angeles Times). The study authors found that fewer than 8% of all calls involved violent crimes, which they defined as homicide, assault with a deadly weapon, robbery, battery, shots fired, and rape. Police spent considerably more of their time and resources responding to traffic incidents and calls categorized as “minor disturbances”.

Emerging Options Within Police Departments

Findings such as those cited above have contributed to efforts by law enforcement and policy makers alike to devise and implement alternative means of addressing situations wherein law enforcement response may not be the best or only option. Some of these are as follows:

- 211 lines: These phone lines connect callers with community-based resources including health and human service agencies and providers. Currently, approximately 94% of persons across the United States have access to 211.
- 311 lines: These are non-emergency lines used by the public to report issues and/or complaints that concern public order or nuisance behavior.
- Crisis hotlines: These numbers are most often focused on addressing mental health crises. For instance, Michel Moore, chief of the Los Angeles Police Department (LAPD), has recently indicated that his department is planning to divert some of the suicide calls that come through the 911 system to a mental health organization phone line (Rubin and Poston, 2020).
- Devising and implementing a multi-phase or co-responder approach to mental health-related calls. LAPD chief Moore envisions sending clinicians on calls, either initially alone or as co-responders with law enforcement. There does appear to be an emerging level of agreement that mental health-related calls could be more effectively handled by professionals who are specially trained to respond to such high-stakes situations. Of serious concern however is that some of these situations will involve violence, and a careful calculus of risk will need to be undertaken in each situation.
- The use of "police community support officers" to respond to relatively minor complaints and disturbances, such as fireworks, arguments between tenants and landlords, noise complaints, and the like. These uniformed, albeit unarmed officers have been used effectively in the United Kingdom to unburden police, who are not trained as social workers or mediators.

In sum, while detailed studies of 911 calls are lacking in the literature, the studies that have been conducted suggest that many of the calls, as well as much time spent by officers responding to said calls, involve incidents that could benefit from a non-law enforcement response, or at the very least, a co-response involving law enforcement and other professionals. A number of alternative means of directing and responding to these calls have been put forth by researchers, policy makers, and law enforcement officials. A series of recent, high-profile encounters between law enforcement and citizens, some of them with tragic and even deadly consequences, has led to a newfound urgency to accelerate these efforts. What follows is a report of our findings of a study of calls for service data in Atlanta. These findings are designed to contribute to efforts to expand diversion and/or deflection efforts to better respond to calls for service that might not require a law enforcement or law enforcement only response.

Study Methods

The authors worked closely with the Atlanta Police Department (APD) Communications Section, City of Atlanta dispatchers, and relevant stakeholders to obtain a three-year extract of 911 Computer-Aided Dispatch (CAD) data. Current year call records were also requested, extending the study data from January 1, 2017 to August 30, 2020. Those 44 months resulted in approximately 3.4 million calls for service records. We also worked with the APD Tactical Crime Analysis Unit to obtain an extract of

incident-level data, of the same timeframe. After thorough processing and cleaning the respective datasets, we systematically programmed all records for multifactor review, categorizations, and analyses. Once these tasks were complete, validity checks were performed until concordance existed. APD and Atlanta Communications Dispatchers were relied upon to verify dispatch codes. In the next step, we joined the datasets by matching the police incident-level data made available to us with the calls for service records from the vendor to the greatest extent possible. The final database represented as complete a picture as possible of calls and the first response(s) to those calls.

The research team used the described master dataset to consult with personnel from the Atlanta/Fulton County Pre-Arrest Diversion (PAD) Initiative as well as APD to classify the nature of the calls and their dispositions. Given an extensive list of codes (and findings similar to the study in Austin Texas, where a small number of codes accounted for a large portion of all calls), we endeavored to classify and categorize the codes into a more meaningful subset of situation types; by determining if the incident pertain to a quality of life issue, mental health concern, property crime, domestic dispute, and/or other types of situations. Input from PAD Initiative experts were also sought to select specific codes on which to focus. These were codes that closely matched the reasons why persons were diverted by APD officers to PAD since its inception, as well as those that were thought to be most likely suitable for diversion and deflection efforts. Those selections were confirmed based on a prior PAD study by the authors as well. Many of the calls of focus involve public order offense-type concerns (a complete list is provided in the Results section).

In addition to analyses covering local call volume, proportions, and type patterns, this study explored the calls of focus across the same metrics. Given the need to inform PAD expansion efforts by APD zone, the location of each call was also analyzed, as were factors related to time of call and response to the call. These data are of significant import in terms of identifying what sort(s) of alternative response could be provided. The next section is dedicated to key findings relevant to potentially diverting E911 calls to 311 services as well as providing data relevant to expansion of PAD and other diversion efforts.

Results

The final study dataset consisted of 3,358,066 calls for service records logged between January 1, 2017 and August 30, 2020. The data included geocoded time, call and incident location, response priority, and the codes assigned in an effort to best describe the type and nature of the incident, among other measures.

Our first task was to understand the distribution of all calls for service by date and APD zone, to assess for any patterns in the data across time. Table 1, at the top of the next page, provides the distribution of all calls by month and year. We find that there were more calls for service in 2017 compared to 2018 and 2019 in the sample. Calls decreased in 2018 and were lower still in the first three months of 2019. Call volumes in 2019 then slightly rebounded to call levels equal or exceeding those in 2018 but were still received at a lower frequency than those observed in 2017.

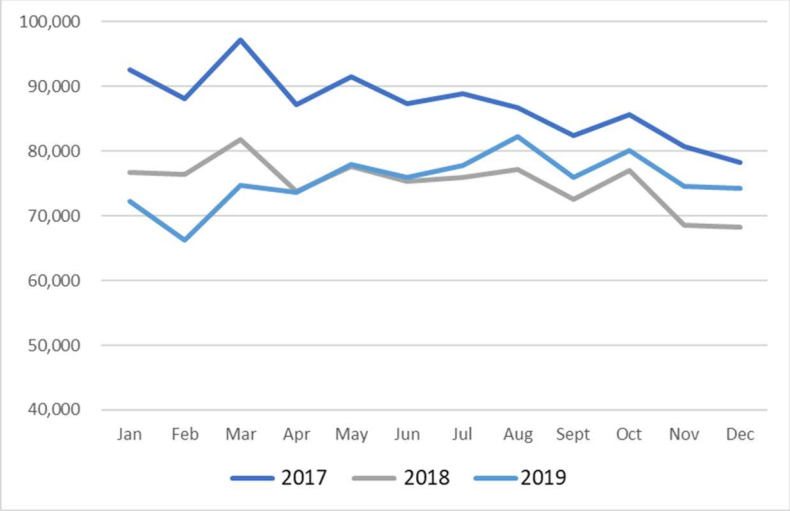
Table 1. Volume of Calls for Service by Month and Year.

	Year of Call			
Month of Call	**2017**	**2018**	**2019**	**2020***
January	92,537	76,700	72,318	76,705
February	88,081	76,472	66,308	73,163
March	97,214	81,736	74,680	70,240
April	87,188	73,843	73,628	58,054
May	91,485	77,705	77,969	65,542
June	87,394	75,340	75,893	47,063
July	88,829	75,901	77,825	53,554
August	86,773	77,148	82,309	60,111
September	82,397	72,524	75,960	No data
October	85,675	77,031	80,057	No data
November	80,799	68,545	74,579	No data
December	78,292	68,242	74,257	No data
Total	**1,046,664**	**901,187**	**905,783**	**504,432***

**Represents only the calls through August 30 of 2020*

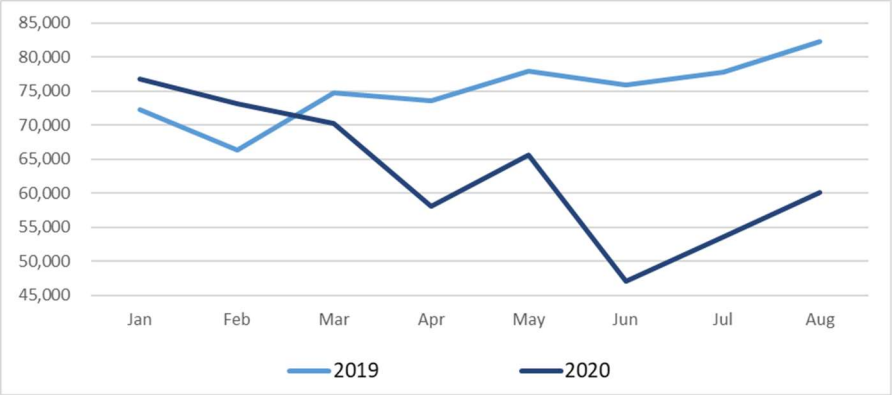
Figure 1, below, graphically depicts the volume of calls for service by month and year for the three full years in the dataset. This view suggests 911 calls are fairly stable across seasons, even though crime tends to increase in summer months.

Figure 1. Calls for Service Volume 2017 – 2019.



Turning to the current year, reviewing those months for which we have 2020 data (refer to Table 1) demonstrates the impact of the global pandemic. There was a sharp drop in calls corresponding to the beginning of pandemic-initiated restrictions in March of 2020 and evidencing a consistent uptick as these pandemic-related restrictions were relaxed beginning in June of 2020. Figure 2, at the top of the next page, graphically depicts the 2020 call trends compared to the same 2019 months.

Figure 2. Calls for Service, January through August 2019 vs. 2020.



Atlanta Police Department's jurisdiction is divided among seven "zones" including the airport. Appendix A, as the last page of this report, is a full-page map of the APD zones and Atlanta City Council Districts. Apportioning the data by APD zone and year allows for an analysis of the geographic and temporal distribution of calls, respective, as seen in Table 2, below. We find that Zones 5 and 2 account for the largest proportion of calls every year.

Table 2. Calls for Service by APD Zone and Year.

	Year of Call				
Zone	**2017**	**2018**	**2019**	**2020***	**Total**
1	141,301	128,650	127,093	68,806	465,850
2	188,126	166,753	157,084	93,324	605,287
3	150,983	121,943	133,238	74,129	480,293
4	147,328	126,806	124,180	75,855	474,169
5	216,400	179,465	179,113	93,470	668,448
6	168,125	144,285	149,046	80,268	541,724
7 (airport)	33,742	32,624	35,073	18,222	119,661
Total	**1,046,005**	**900,526**	**904,827**	**504,074**	**3,355,432**

**Represents only the calls through August 30 of 2020*

Our next task was to describe the nature of calls for service. Beginning with a total of 452 individual call codes, we were able to establish 41 as nature groups or situation categories. Specifically, the most common 100 codes comprise 98.7% of all calls for service received. Therefore, the 352 other named call codes and the calls with no code assigned accounted for less than 2% of all other calls. However, those less frequent call codes constituted situations that could be grouped into categories with the predominantly utilized codes and were categorized accordingly. For instance, the nature of a call could be defined as "Alarm" from codes entered for an audible alarm or a silent alarm.

Table 3, on the next page, provides the call categories with associated frequency (sorted descending) and percent statistics. The cumulative percent column provides the running total or proportional increase for the row in addition to all above all rows. For instance, the fourth row in the below table

displays the frequency of all codes categorized as "Public Order Offense," which represent 8.5% of all calls as noted in the percent column. The corresponding cumulative percent column indicates that codes of that nature, as well as all codes in the categories above it, account for 53.4% of all calls.

Table 3. CAD Call Codes Categorized by Nature (in descending order of frequency).

Call Code Assigned Category	Frequency	Percent	Cumulative %
Motor Vehicle Incident	629,734	18.8	18.8
Police Patrol	584,149	17.4	36.2
Fight in Progress	293,231	8.7	44.9
Public Order Offense	287,080	8.5	53.4
Motor Vehicle – Collision	235,765	7	60.4
Theft/Larceny/Burglary	187,923	5.6	66.0
Officer Reporting in on Extra Job	175,355	5.2	71.2
Caller has Info for an Officer	174,197	5.2	76.4
Alarm	174,137	5.2	81.6
Suspicious Person (e.g., prowler)	160,171	4.8	86.4
Injured Person	74,007	2.2	88.6
Vandalism	51,923	1.5	90.1
Other	44,959	1.3	91.4
(Suspected) Shots Fired	31,711	0.9	92.3
Motor Vehicle - Injured Person	30,704	0.9	93.2
Bomb/Explosive	23,337	0.7	93.9
911 Hang up	22,865	0.7	94.6
Check and Advise	16,285	0.5	95.1
Reporting a Sex Offense	15,332	0.5	95.6
Drugs Related Incident	14,658	0.4	96.0
Wanted or Escaped Person	13,250	0.4	96.4
Suicide	12,218	0.4	96.8
Police Dept. Action (e.g., pursuit)	11,882	0.4	97.2
Unknown	11,130	0.3	97.5
Violence (e.g., robbery in progress)	10,684	0.3	97.8
Fire/Fireworks	10,627	0.3	98.1
Missing Person	10,368	0.3	98.4
Tree/Wires Down	8,697	0.3	98.7
Animal Call	7,961	0.2	98.9
Person Armed	7,829	0.2	99.1
Wagon Call (e.g., police transport)	7,593	0.2	99.3
Person Shot	4,205	0.1	99.4
City Code Issue	2,941	0.1	99.5
Dwelling (e.g., halfway house)	2,423	0.1	99.6
Lockout	2,027	0.1	99.7
Person Trapped	1,893	0.1	99.8

Call Code Assigned Category	Frequency	Percent	Cumulative %
Abandoned (e.g., children)	1,575	0.0	99.8
Dead Person	1,295	0.0	99.8
Admin (e.g., in route)	1,285	0.0	99.8
Shelter Run	382	0.0	99.8
Health Care (e.g., heart attack)	278	0.0	100.0
Total	**3,358,066**	**100.0**	

Next, we turned our attention to the *calls of focus*−those calls determined likely the most appropriate to consider for diversion and/or deflection efforts. Given the present study focuses on this subset of calls that would likely be suitable for potential diversion to 311 services or service provider co-response, we relied on our own experience with similar data as well as input from the Atlanta/Fulton County PAD personnel to identify a subset of call codes on which to focus. Table 4, below, provides the codes considered as calls of focus, as well as their accompanying statistics. Together these calls of focus represented 18.4% of all 911 calls received during the study period.

Table 4. Calls of Focus (in decreasing order of frequency).

Original Call Code	Frequency	Percent	Cumulative Percent
Suspicious Person	151,429	24.6	24.6
Directed Patrol	129,643	21.0	45.6
Criminal Trespass	116,682	18.9	64.5
Street/Sidewalk Hazard	77,795	12.6	77.1
Person Injured/Down	72,145	11.7	88.8
Demented Person	20,102	3.3	92.1
Shoplifting	17,408	2.8	94.9
Intoxicated Person in Public Place	7,712	1.3	96.1
Public Indecency	6,813	1.1	97.2
Problem Solving	3,541	0.6	97.8
Person Screaming	3,532	0.6	98.4
Info/Suspicious Person	2,422	0.4	98.8
Intoxicated Person-In Auto (DUI)	2,021	0.3	99.1
Soliciting Sex	1,629	0.3	99.4
Info/Disorderly Child	963	0.2	99.5
Info/Illegal Drugs	717	0.1	99.6
Disorderly Child/Weapon	418	0.1	99.7
Shelter Run	381	0.1	99.8
Info/Demented Person	370	0.1	99.8
Info/Street Hazard	250	0.0	99.9
Help Call Non-Police	233	0.0	99.9
Info/Public Indecency	199	0.0	99.9
Info/Drunk	114	0.0	100.0
Healthcare	93	0.0	100.0

Original Call Code	Frequency	Percent	Cumulative Percent
Info/Soliciting Sex	64	0.0	100.0
Drunk/Injured	31	0.0	100.0
Drunk/Street Hazard	18	0.0	100.0
Meet Officer/Disorderly Child	16	0.0	100.0
Meet Officer/Dement Per	15	0.0	100.0
Info/Person Scream	11	0.0	100.0
Meet Officer/Drugs	11	0.0	100.0
Pub Indecency/Street Hazard	9	0.0	100.0
Bolo/Suspicious Per	6	0.0	100.0
Meet Officer/Drunk	6	0.0	100.0
Meet Officer/Pub Indecency	5	0.0	100.0
Public Indecency/Drunk	2	0.0	100.0
Lookout/Drunk Person	1	0.0	100.0
Person Injured	1	0.0	100.0
Pub Indecency/Soliciting Sex	1	0.0	100.0
Total	**616,809**	**100.0**	**100.0**

As is apparent in the above table, looking in the cumulative percent column which indicates that the top five call types in order of frequency account for close to 90% of all calls of focus, with the top 10 accounting for approximately 98% of all calls. While the first two categorizations are very general, the third through sixth call codes in order of frequency suggest the reason for the call likely involved concerns/issues related to mental health and/or homelessness.

Table 5, below, displays the distribution of these calls of focus by APD zone. Using the 2020 population for each zone, we also report the calculated per resident incident rates and call rates per 10,000 residents for comparison.

Table 5. Calls of Focus by APD Zone.

APD ZONE	Frequency	%	Valid %	2020 Population Est.	Incident Rate (calls per resident)	Population Rate (calls per 10k residents)
1	93,852	15.1	15.2	67,243	1.4	13,957
2	89,068	14.4	14.4	121,253	0.7	7,346
3	82,085	13.2	13.3	57,793	1.4	14,203
4	106,268	17.1	17.2	80,624	1.3	13,181
5	133,576	21.6	21.6	65,651	2.0	20,346
6	90,892	14.7	14.7	110,989	0.8	8,189
7 (airport)	23,523	3.8	3.8			
Total	619,264	99.9	100			
Missing	454	0.1				
Total	**619,718**	**100**				

In decreasing order of frequency, the calls of focus volume was greatest in zone 5, followed by zones 4, 1, 6, 2, 3, and 7 (airport). Together zones 5, 4, and 1 accounted for 54% of all calls of focus during the study period. Currently Atlanta/Fulton County PAD serves APD zones 5 and 6. To the extent that these calls of focus accurately represent potential for diversion and/or deflection, consideration should be given to prioritizing expansion to APD zones 4 and 1. Calls per 10,000 residents in those zone were nearly 14,000 and over 13,000 respectively, suggesting sizable potential effect.

Of most interest in this study and thought to be among greatest import to efforts to expand diversion and/or deflection efforts is the distribution of the specific codes considered calls of focus by APD zone. These data can be found in Table 6, below, which displays the count and corresponding percentage of each call of focus code within the zones. As a visual aid, the largest proportion of each call code among the zones is highlighted.

Table 6. Calls of Focus: Call Codes by APD Zone.

Call Code*		**APD Zone**							
		1	**2**	**3**	**4**	**5**	**6**	**7 (airport)**	***Totals***
Criminal Trespassing	Count	15,855	14,967	17,180	17,340	30,175	21,137	28	116,682
	% in zone	13.6%	12.8%	14.7%	14.9%	25.9%	18.1%	0.0%	100%
Demented Person	Count	3,941	1,661	3,335	4,109	4,084	2,582	387	20,099
	% in zone	19.6%	8.3%	16.6%	20.4%	20.3%	12.8%	1.9%	100%
Directed Patrol	Count	17,975	11,853	13,930	39,437	22,804	17,236	6,149	129,384
	% in zone	13.9%	9.2%	10.8%	30.5%	17.6%	13.3%	4.8%	100%
Disorderly Child/ Weapon	Count	120	16	113	116	11	42	0	418
	% in zone	28.7%	3.8%	27.0%	27.8%	2.6%	10.0%	0.0%	100%
Info/Disorderly Child	Count	267	66	251	257	40	82	0	963
	% in zone	27.7%	6.9%	26.1%	26.7%	4.2%	8.5%	0.0%	100%
Info/Drunk	Count	14	26	17	8	34	15	0	114
	% in zone	12.3%	22.8%	14.9%	7.0%	29.8%	13.2%	0.0%	100%
Info/Illegal Drugs Count	Count	106	124	139	73	198	75	2	717
	% in zone	14.8%	17.3%	19.4%	10.2%	27.6%	10.5%	0.3%	100%
Info/Suspicious Person	Count	291	516	478	368	349	417	2	2421
	% in zone	12.0%	21.3%	19.7%	15.2%	14.4%	17.2%	0.1%	100%
Intoxicated Person in Auto (DUI)	Count	178	574	266	171	343	467	22	2,021
	% in zone	8.8%	28.4%	13.2%	8.5%	17.0%	23.1%	1.1%	100%
Intoxicated Person in Public Place	Count	802	1,252	728	691	2,116	1,052	1,066	7,707
	% in zone	10.4%	16.2%	9.4%	9.0%	27.5%	13.6%	13.8%	100%
Person Injured/ Down	Count	11,358	9,163	9,318	10,952	16,753	9,602	4,988	72,134
	% in zone	15.7%	12.7%	12.9%	15.2%	23.2%	13.3%	6.9%	100%
Person Screaming	Count	480	789	382	397	650	818	16	3,532
	% in zone	13.6%	22.3%	10.8%	11.2%	18.4%	23.2%	0.5%	100%

Call Code*		APD Zone							
		1	2	3	4	5	6	7 (airport)	*Totals*
Problem Solving	Count	2,293	98	388	372	77	289	23	3,540
	% in zone	64.8%	2.8%	11.0%	10.5%	2.2%	8.2%	0.6%	100%
Public Indecency	Count	659	874	568	653	2,508	1,405	144	6,811
	% in zone	9.7%	12.8%	8.3%	9.6%	36.8%	20.6%	2.1%	100%
Shelter Run	Count	42	31	32	18	192	41	24	380
	% in zone	11.1%	8.2%	8.4%	4.7%	50.5%	10.8%	6.3%	100%
Shoplifting	Count	3,001	3,809	2,105	3,335	2,137	3,000	21	17,408
	% in zone	17.2%	21.9%	12.1%	19.2%	12.3%	17.2%	0.1%	100%
Soliciting Sex	Count	415	56	530	82	455	74	17	1,629
	% in zone	25.5%	3.4%	32.5%	5.0%	27.9%	4.5%	1.0%	100%
Street/Sidewalk Hazard	Count	11,276	18,450	13,318	7,009	16,735	9,101	1,859	77,748
	% in zone	14.5%	23.7%	17.1%	9.0%	21.5%	11.7%	2.4%	100%
Suspicious Person	Count	24,096	24,078	18,437	20,243	33,045	22,829	8,583	151,311
	% in zone	15.9%	15.9%	12.2%	13.4%	21.8%	15.1%	5.7%	100%
Total	Count	93,373	88,629	81,697	10,5837	133,023	90,467	23,335	616,361
	% in zone	15.1%	14.4%	13.3%	17.2%	21.6%	14.7%	3.8%	100%

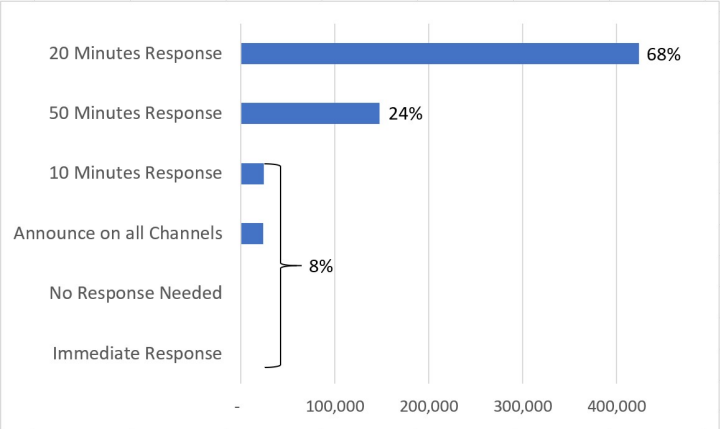
**Codes which across all zones occurred less than 100 times were excerpted for ease of reading.*

The data in the above table note which particular calls of focus are most common in which APD zones, allowing for an analysis of which types of diversion/deflection services and resources would be most helpful and where. For example, looking at the Criminal Trespass/Burglar in Store code, Zone 5 accounted for 26% of all calls for this code, followed by Zone 6 at 18%. Zones 1 through 4 were all roughly comparable at between 13% and 15% of calls of this type.

There are three primary sources of calls that are dispatched through the E911 Communications Unit. Besides the familiar "dial 911", there is a phone number callers can use to request 911 dispatch services when an emergency response is not needed as well as a number designated to police department personnel (regardless if on the job, at a side job, or off duty). In order to assess whether the proportion of these calls of focus differed by Zone via the 911 line and non-emergency calls rather than all calls for service, we conducted supplemental analyses by filtering out the police-initiated source type. There were no significant differences between those results and the numbers presented in Table 6, indicating that the source of the call is not related (in this data) to the distribution of these calls of focus across APD zones.

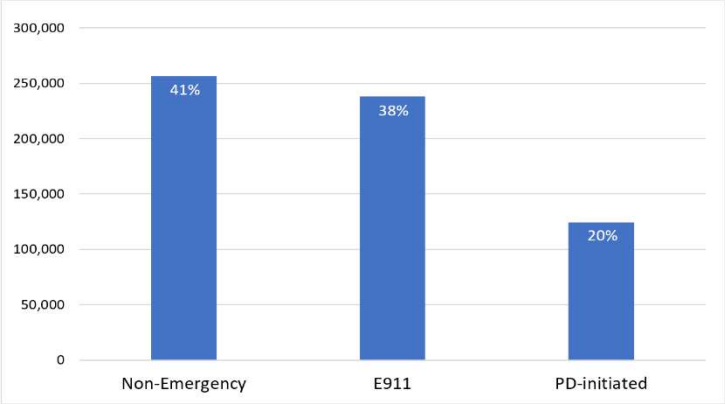
Regardless of location, calls are assigned a priority level in an effort to triage incidents by the degree of perceived urgency required for each response. Figure 3, at the top of the next page, provides the assigned response urgency for calls of focus during the study period.

Figure 3. Calls of Focus: Assigned Response Priority.



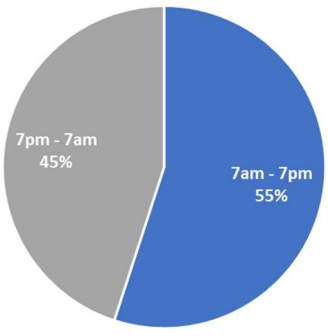
The fact that 93% of these calls of focus are assigned either a 20-minute or 50-minute response suggests that for the most part these calls of focus do not represent matters of critical urgency. The call source also reflects this finding, as seen in Figure 4, below. As the graph makes apparent, just under 40% calls of focus came through the E911 line, with 61.5% either from the PD-indicated or non-emergency lines.

Figure 4. Calls of Focus: Source Type.



In addition to the location, priority, and source of calls, it is also important to ascertain the timeframes during which the 619,718 calls of focus were received. Figure 5, below, displays the time of the call according to two time periods – 7am to 7pm (340,961 calls of focus) and 7pm to 7am (278,743 calls of focus).

Figure 5. Calls of Focus: Request for Service Timeframe.



While the distribution according to time is fairly even across these two periods, ten percent more calls of focus are received during the 7am to 7pm time slot, the timeframe in which 311 dispatch operates. Further analyses of codes within the calls of focus group shows that 40% of those 7am to 7pm calls are for public order offenses. The data also show that slightly more of the calls of focus during those daytime hours are received via the nonemergency line.

Our last set of analyses explored call responses. Disposition codes were collapsed from 71 response options to 22 groups (listed in Table 7 below). When examining all call dispositions, we find that 95% of calls are resolved. Just over 84,000 or 2.2 % of incidents were considered resolved based on other agencies handling the situation. Given that Grady Memorial Hospital has their own emergency dispatch center, it was expected that an ambulance would be called in an additional 1.5% of cleared incidents; however, over the course of our study period this amounted to a not insignificant 56,439 occasions. Table 7, below, provides the grouped disposition statistics for calls of focus by APD zone.

Table 7. Calls of Focus: Dispositions by APD Zone (in decreasing order of total frequency).

	APD Zone							
Disposition Category	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**Total**
Investigation	72,288	67,610	63,505	86,596	96,576	70,654	14,271	471,500
Gone (e.g., nothing found)	10,609	14,878	11,431	11,309	17,011	15,663	1,378	82,279
Handled	7,550	5,425	6,738	7,459	10,634	6,608	4,265	48,679
Cancelled/Nullified	6,868	8,541	7,167	6,545	10,770	5,844	1,549	47,284
Report (e.g., incident, arrest)	3,308	3,676	2,872	3,054	6,890	3,606	768	24,174
Unknown	3,295	3,678	1,696	2,261	8,471	3,531	3	22,935
Cleared (by citation or arrest)	1,760	1,922	1,490	1,377	5,960	2,729	449	15,687
Other	877	1,020	909	707	1,295	700	1,061	6,569
Impound	1,185	1,319	1,313	695	836	843	80	6,271
Back in Service	286	243	242	575	647	236	2,573	4,802
Information	127	120	75	175	251	201	119	1,068
Call (e.g., arrived)	94	105	61	124	142	91	262	879
Alarm	74	146	120	185	51	149	7	732
Teleserve (served by phone)	94	48	56	91	61	67	130	547
Truancy	25	5	9	14	4	4	0	61
Shotgun (Removing)	18	9	0	3	8	2	1	41
Check	8	6	4	3	5	9	1	36
Needed (Assistance)	15	3	1	2	3	2	1	27
Curfew	3	1	6	3	6	1	0	20
Found (Explosive)	0	0	0	2	13	0	2	17
Owner (Released)	3	2	1	3	1	4	1	15
Stolen (Articles)	2	2	2	1	1	1	1	10
Total	**108,489**	**108,759**	**97,698**	**121,184**	**159,636**	**110,945**	**26,922**	**733,633**

** Note that disposition are based on how the call was resolved or how the assigned responder reported, thus may not include all subsequent arrests, such as from investigations. APD averages over 28,000 arrests a year, with a notable uptick in 2017 of nearly 33,000.*

Quite clearly, most (64% of the total) calls indicate being disposed of via an investigation, with the second most frequently occurring disposition being indicated as “gone”, at a distant 11%. This disposition code indicates that upon arrival, the officer(s) found that the person(s) or situation indicated in the call for service were no longer on scene.

Discussion

The need to better understand calls for service and related issues around policing have taken on a renewed urgency as a direct result of several deadly police-citizen encounters that have occurred in Atlanta and across the nation. The present study examined over 3.4 million calls for service in the Atlanta Police Department’s jurisdiction, covering the time span between January 1, 2017 through August 30, 2020. Call data from the Computer-Assisted Dispatch (CAD) system were combined with incident-level data from the Atlanta Police Department to provide a means of understanding the types and nature of calls for service, as well as the responses to these calls. Specific types of calls thought to be most appropriate for consideration of potential diversion and/or deflection were identified for the purpose of informing the expansion of diversion efforts city-wide, as well as to inform related efforts involving the 311 system and other community agencies.

An analysis of this data finds that 911 calls of focus represent approximately 18% of all calls for service over the study period. These are calls that typically involve public order, nuisance, trespassing, shoplifting, and similar calls that both our experience and the professional literature suggest often involve issues of mental illness, substance abuse, and homelessness. The results of the present study find that whereas Zone 5 has both the highest total number of calls for service as well as calls of focus, Zone 4 has the next highest number of calls of focus, while having the fifth highest overall call volume. Zone 1 has the third highest number of calls of focus, while having the sixth highest overall call volume. In decreasing order of number of calls of focus, the zones are ranked as follows:

1. Zone 5 (1st in overall call volume)
2. Zone 4 (5th in overall call volume)
3. Zone 1 (6th in overall call volume)
4. Zone 6 (3rd in overall call volume)
5. Zone 2 (2nd in overall call volume)
6. Zone 3 (4th in overall call volume)
7. Zone 7, airport (7th in overall call volume)

Therefore, apportioning expansion resources based on calls of focus results in a prioritization of zones that would not be consistent with their rankings in terms of overall call volume. An important next step would be to closely examine the data depicted in Table 6, Calls of Focus by Zone, in order to better understand what types of specific diversion and non-law enforcement agency responses might be best applied to which types of calls, as well as to gain insight into which types of calls would be appropriate for diversion to the 311 as opposed to 911 system.

When dispatch assess call priority levels, the calls of focus are most often (93% of instances) assigned codes indicating that 20 and 50-minute response times are reasonable, suggesting that they are not in

fact calls regarding emergencies, suggesting possible diversion. Data regarding the call source is also consistent in this regard, noting that 61.5% are through either the PD-indicated or non-emergency lines. Lastly, there are more calls of focus received during 311 operating hours (7am to 7pm), and the majority of those calls (40%) are for public order offenses. These findings accord well with the relatively limited literature on calls for service, much of which has been conducted over the past five to ten years.

Gaps in the Present Study

The data used in the present study only represent calls for service made available through the analysis of Computer-Aided Dispatch (CAD) data and incident-level data provided by the Atlanta Police Department. While voluminous, it will be critically important to augment this data via an assessment of the characteristics and results of encounters between officers and citizens that occur in situ in order to gain a more complete picture of the potential to divert to 311 and/or non-law enforcement responses. This will involve interviews and/or focus groups with patrol officers and APD leadership, as well as potential field observations of these encounters.

It will also be important to work with Grady Behavioral Health Link and Georgia Crisis Action Line (GCAL) to obtain a three-year extract of calls for service data as well as 311 data, to more fully understand the universe of calls for service. These data will be combined with the data used in the present study to greatest extent possible.

Similarly, the present study results need to be expanded to include additional information regarding calls specifically related to behavioral health issues. These efforts will entail the gathering and examination of data to address areas in which there exists multi-jurisdictional overlap involving MARTA and GSU police, the Downtown Ambassadors, and other agencies who serve as alternative responders to police. It will also be critical to understanding the relevance and importance of issues such as various timing and duration of the calls, assigned priority, and smaller geographical locations (e.g., neighborhoods), to further detail and contextualize our understanding of these calls for service. Together these data can inform the potential migration of non-crisis calls to the 311 system, aiming to reduce the large volume of calls to 911 that involve quality of life rather than emergency calls documented in the current study.

Finally, it will be key to assess the degree to which project findings and any resulting expansion efforts contribute to systems-level change and potential longer-term impacts. Given the evidence supporting Seattle's LEAD program and the fact that PAD is an official LEAD affiliate, we expect that the proposed expansion of PAD will result in reduced recidivism and increased lifestyle stability of PAD participants, while at the same time decreasing criminal justice involvement of persons whose needs can be much better met through community alternatives to arrest and booking into jail. Nonetheless, it will be very important to assess the fidelity of expansion efforts as well as the degree to which these efforts contribute to the expected objectives and outcomes.

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Appendix A. Map of APD Zones and City Council Districts.