

The 911 Call Processing System: A Review of the Literature as it Relates to Policing

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Fact Sheet

When people think of 911, they may think first of emergency medical services. But a significant portion of the 911 calls made every year in the United States are routed to police departments. There's only one problem: nobody knows how many. And 911 calls take up an inordinate amount of police time and resources—often in situations that don't constitute a true emergency.

With 911 systems capturing information at each step of the call-to-dispatch process, it might seem like 911 would be easy to study, and there would exist a broad body of literature analyzing patterns among calls and helping police do their jobs. But 911 call centers (called public service answering points, or PSAPs) operate independently and locally. They cannot transfer calls to each other and, if your call is routed to the wrong PSAP, they may not be able to send responders to your emergency at all. The independent development of PSAPs allowed 911 to spread rapidly through the United States, but today it is one of the greatest hindrances to actually understanding the system we use and its effects.

In this report, the Vera Institute of Justice (Vera) examines the body of literature that has developed as researchers have attempted to collect and study 911 data in the context of policing, identifies gaps in that literature, recommends further areas for research, and highlights jurisdictions that are using their 911 data to improve policing effectiveness by creating alternatives to police response.

Limitations of current studies and data collection practices

In order to analyze 911, researchers need data from the nation's many 911 systems. But different PSAPs use different protocols, codes, and formats to record and store data, which

presents challenges to researchers who want to look beyond the limits of a single jurisdictional boundary. Because of these challenges, researchers have taken two main approaches to the study of the 911 system. First, there are studies using simplified, but more readily available, metrics such as call volume, call type, and response time. These studies allow researchers to draw broad generalizations about several jurisdictions at the same time, but are limited in their ability to inform about trends with any specificity—they simply collapse too many variables into too few categories. Then, there are complex studies modeling caller behavior, call type patterns over time, and factors affecting the ability to respond in a timely fashion. These latter studies demonstrate the richness of 911 data available from individual jurisdictions, but are limited in scope because researchers can't compare this data across jurisdictions. Such studies—especially when based on incomplete data—are fraught with limitations: police departments cannot say with confidence that a solution effective in a distant city will also be effective in their communities.

Call for research

Analysis of calls for service data provides a huge and largely untapped opportunity for researchers and practitioners to inform and transform policy and practice. And understanding the landscape of 911 call processing at a deeper level gives stakeholders across the board the chance to develop sound alternatives—like those involving Crisis Intervention Teams, police/public health coresponder models, and nonemergency numbers like 211 and 311—that go beyond police responses to calls for service. To this end, further studies should be done to develop knowledge or aggregate existing data in the following areas:

For more information

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To read the full report, visit www.vera.org/911-call-processing-review. For more information about this report, contact Rebecca Neusteter, policing program

director, at RNeusteter@vera.org. Vera thanks Arnold Ventures, LLC, without whose generous support this project would not have been possible.

The Vera Institute of Justice is a justice reform change agent. Vera produces ideas, analysis, and research that inspire change in the systems people rely upon for

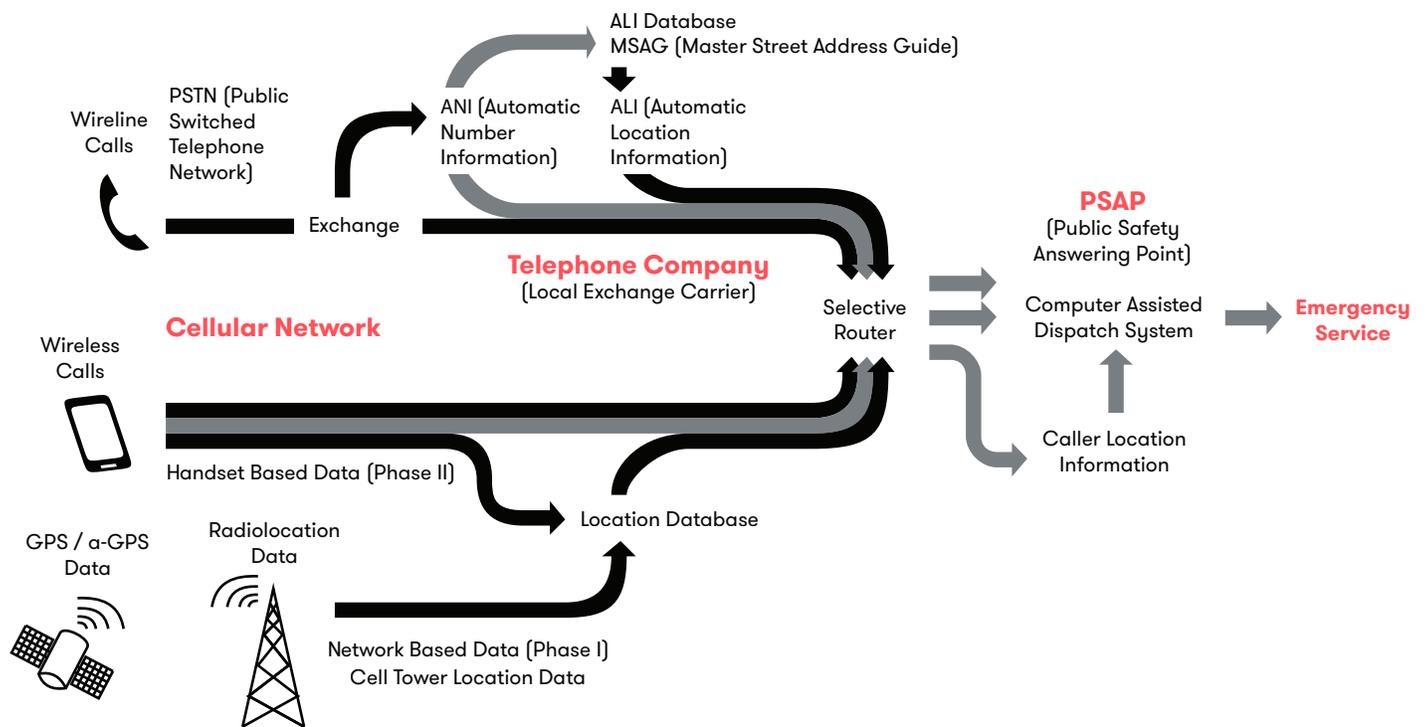
safety and justice, and works in close partnership with government and civic leaders to implement it. Vera is currently pursuing core priorities of ending the misuse of jails, transforming conditions of confinement, and ensuring that justice systems more effectively serve America's increasingly diverse communities. For more information, visit www.vera.org.

- > coding and protocols;
- > adequacy of coding;
- > metrics other than response time;
- > call outcomes based on type of response;
- > frequent caller protocols; and
- > alternative response options.

The efforts in agencies such as the Tucson Police Department and Camden County Police Department (New Jersey) are just the beginning—both agencies have

partnered with Vera’s Policing Program to help expand alternatives locally and nationally by identifying gaps in research and practice. Such work is necessary to fully understand the landscape of emergency communications, with the goal of developing opportunities to respond without resorting to enforcement. 911, 911 call-takers, and 911 dispatchers play a vital role in determining when, how, and whether to use law enforcement resources. As the United States continues to evaluate the role of its police in the community, understanding these critical components will be crucial to developing a criminal justice system that best serves the nation—one that is smaller, smarter, and more equitable.

Figure 1
How the 911 system works: From call to response



Source: Adapted from Evan Mason, “9-1-1 System,” via Wikimedia Commons. Licensed under the Creative Commons Attribution-ShareAlike 3.0 Unported license.