

TRANSFORM 911

# BLUEPRINT FOR CHANGE

2022







# Table of Contents

Executive Summary.....	4
Acknowledgments and Attributions .....	9
Chapter One: Introducing Transform911 .....	17
The Workgroups.....	22
Convenings and Other Feedback Sessions.....	23
Transform911 Partnerships .....	24
Launching the Blueprint.....	25
Chapter Two: Blueprint for Action .....	26
Transform911 North Star.....	26
Defining 911 .....	27
How We’re Understanding Community.....	27
Transforming 911.....	27
The Future is Now .....	28
Seven-Point Plan to Transform 911 .....	30
1. (Re)Introducing 911 .....	31
<i>Everyone knows the number, almost no one knows how it works.</i>	
2. Putting the People in 911.....	32
<i>Community partnership is essential to a 911 system that works for everyone.</i>	
3. Advancing the Workforce .....	33
<i>There’s no 911 without a recognized, supported, professional workforce.</i>	
4. Making 911 Independent and Equal .....	34
<i>ECCs that are independent and equal to other local first response systems help improve equitable outcomes.</i>	
5. Ensuring the Right Response at the Right Time .....	34
<i>A diverse ecosystem of responses reduces reliance on the police by default.</i>	
6. Strengthening Data and Tech Standards .....	34
<i>Reliable and ethical data and tech improves responses.</i>	
7. Securing National-Level Support (for 911).....	35
<i>Effective, equitable emergency response locally requires unequivocal support federally.</i>	
Chapter Three: (Re)Introducing 911 .....	37
Chapter Four: Putting the People in 911 .....	40
Chapter Five: Advancing the Workforce .....	44

Chapter Six: Making 911 Independent and Equal.....	49
Chapter Seven: Ensuring the Right Response at the Right Time .....	52
Chapter Eight: Strengthening Data and Tech Standards .....	63
Chapter Nine: Securing National-Level Support (for 911) .....	68
Chapter Ten: Research Agenda.....	77
Essential Research.....	77
Evaluations to Conduct Concurrently with the Recommendations.....	77
Appendices.....	79
A: Transform911 Glossary.....	80
B: Transform911 Workgroup Co-Chairs and Members .....	85
C1: Transform911 Virtual Roundtable Planning Survey Approach and Findings.....	114
C2: Transform911 Survey for Colleagues.....	119
D: Transform911 Draft Recommendations by Workgroup for Public Comment .....	125
E1: Public Feedback on Draft Recommendations – FAQ .....	127
E2: Visualizing the 2 <sup>nd</sup> Transform911 Convening.....	129
E3: Transform911 Recommendations Feedback Synthesis .....	143
F: Transform911 Workgroup Recommendation Crosswalk.....	159
G: Transform911 Operationalizing and Evaluating the Recommendations .....	165
H: Transform911 Research Questions for Inquiry and Action .....	170

## Recommended citation:

Transform911. “Transform911: A Blueprint for Change.” University of Chicago Health Lab, June 2022.



# Executive Summary

## Scope of the Problem

Across America, at least 240 million calls are made to 911 each year.<sup>1</sup> Many of these result in timely responses from a dedicated group of 911 professionals<sup>2</sup> to medical emergencies, fires, and serious crimes in progress. This everyday excellence—24 hours a day, 365 days a year—is a remarkable, often lifesaving accomplishment. Indeed, 911 professionals are true first responders. At the same time, the majority of calls to 911 are for issues that fall outside the scope of emergency calls, ranging from noise complaints to minor traffic collisions or mental health crises.<sup>3</sup> These calls do not require a police, fire, or medical response, and people impacted by the criminal justice system,<sup>4</sup> along with 911 professionals and police officers, have been arguing for years that something needs to change in the 911 system.<sup>5</sup>

And what a time for change it is. The world is reeling from a global pandemic, and many cities are experiencing rates of violent crime, especially gun crime, that have not been seen in decades.<sup>6</sup> The recommendations being put forth by Transform911 in this blueprint support the increasing demand for 911 professionals and police, fire, and EMS department responses that are the consequence of these disturbing trends. These recommendations are not in contradiction of these new realities. In fact, they help *increase* the time that police and 911 professionals can dedicate to responding to violent crime, as other elements of the first responder ecosystem can take responsibility for calls that need not involve police, helping to prioritize scarce public resources more efficiently and equitably to where they are most needed.

The levels of systemic complexity are typically hidden from public view and consideration, as is the dedicated 911 professional workforce; 911 doesn't enjoy the broad public recognition that other first responder systems have; it is often conflated with policing.<sup>7</sup> As we will describe and offer solutions for, that 911 is under the radar screen has impacted research, reform, funding, staffing, and evolution of the system. This has profound implications for 911 delivering on its promise, impacting the health and wellbeing<sup>8</sup> of people across America.

---

<sup>1</sup> National Emergency Number Association, "9-1-1 Statistics," accessed November 22, 2021, <https://www.nena.org/page/911Statistics>.

<sup>2</sup> The term "911 professionals" is used to include operators, call takers, call handlers, dispatchers, and managers in Emergency Communications Centers (ECCs) throughout the blueprint. Workgroup co-chairs and members chose this term to emphasize the professional nature of these jobs.

<sup>3</sup> S. Rebecca Neusteter et al., "Understanding Police Enforcement: A Multicity 911 Analysis," Vera Institute of Justice, September 2020, <https://www.vera.org/publications/understanding-police-enforcement-911-analysis>; Cynthia Lum et al., "Can We Really Defund the Police? A Nine-Agency Study of Police Response to Calls for Service," Police Quarterly (2021), <https://doi.org/10.1177/10986111211035002>.

<sup>4</sup> This includes people who have experienced an arrest and/or period of incarceration as well as their families and immediate communities.

<sup>5</sup> Neusteter et al., "Understanding Police Enforcement."

<sup>6</sup> <https://www.npr.org/2021/09/27/1040904770/fbi-data-murder-increase-2020>

<sup>7</sup> The dearth of reports and research on this issue is a testament to the lack of attention paid to the 911 system as separate from policing.

<sup>8</sup> The recognition that transformation of the 911 system is an essential element in increasing equitable access to wellbeing is what led Transform911 to partner with the Full Frame Initiative (FFI) on this effort. FFI has developed and works with systems and communities to operationalize an evidence-informed framework for wellbeing, which FFI, and by extension this effort, defines as "the set of needs and experiences universally required in combination and balance to weather challenges and have health and hope" (for more information, see [fullframeinitiative.org](https://fullframeinitiative.org)). There is a discrete set of these needs and experiences, which all humans are "hardwired" for; they include social connectedness and belonging; safety; stability (predictability and



America's 911 system exhibits many opportunities for improvement in effectiveness, efficiency, and equity. The lack of common minimum standards for workforce training and support, data collection and reporting, and technology interoperability, combined with the lack of federal funding to address these challenges, means that while the emergency number people call is constant, the response's appropriateness is highly variable. This inequity in system responses almost universally disadvantages those in small, poor, or otherwise marginalized communities, and it undermines public safety and public health.

This need for change is compounded by the fact that virtually every system in the US, including 911, must reckon with structural racism to be equally accessible and effective for everyone. We must contend with these challenges now to set a solid foundation upon which to build a 911 system that is adequately resourced to respond to the complexities and emergencies of the future. In short, 911 is not a reliable pathway to health and wellbeing for everyone in America.

Starting in July 2022, the new 988 suicide prevention and mental health crisis hotline will begin implementation nationwide. Individuals who call or text 988 will be connected to a trained counselor who will listen and provide support and connections to needed resources. The 988 hotline offers opportunities to decouple care and support from enforcement and is long overdue. Of course, implementing 988 will require us to address many strategic and operational details. Many of the recommendations from this blueprint should also be applied to the new 988 system.

Further complicating the changing landscape for 911 is the burgeoning innovation in technology as it applies to almost every aspect of the system: calls coming in, call handling, and information processing to and from dispatch. For example, NG911<sup>9</sup> is poised to change the nature and type of information that can be shared with Emergency Communications Centers (ECCs),<sup>10</sup> to include video and text, as well as offering cloud-based data systems that enable information sharing across ECCs. These changes come at a financial cost in terms of meeting technology needs and increased staff training, and a cost to the workforce, as a barrage of traumatic visual content can be expected to affect 911 professionals' wellbeing.

## Defining 911

Transform911 defines 911 as the system that, when working at its full potential, provides members of the public who are facing acute threats to their wellbeing<sup>11</sup> with appropriate, equitable, relevant, immediate, and around-the-clock access to relief from distress. 911 is a complex system requiring expertise, communication, coordination, resources, and trust to span

---

familiarity); influence, purpose, and a correlation between efforts and outcomes; and meaningful access to relevant resources such as food and shelter. While all people are driven to meet their needs in these domains, racism, sexism, and other "otherings" create differential social, contextual, and structural access.

<sup>9</sup> For resources on the NG911 effort, see <https://www.ng911institute.org/resources> and [https://www.nena.org/page/NG911\\_Project](https://www.nena.org/page/NG911_Project).

<sup>10</sup> These entities are often referred to as Public Safety Answering Points (PSAPs). However, a diverse array of other entities, including 911.gov, the National Institutes of Health, APCO International, the IJIS Institute, and many local emergency centers also use the term ECC. At the request of Transform911 co-chairs and members, this blueprint uses the term Emergency Communications Centers (ECCs) throughout.

<sup>11</sup> We define wellbeing as "the set of needs and experiences universally required in combination and balance to weather challenges and have health and hope." An extensive body of research demonstrates there is a discrete set of these needs and experiences, which all humans are "hardwired" for; they include social connectedness and belonging; safety; stability (predictability and familiarity); influence, purpose, and a correlation between efforts and outcomes; and meaningful access to relevant resources such as food and shelter. For more information, see [fullframeinitiative.org](https://fullframeinitiative.org).

- (a) the diverse cultural, historical, linguistic and other realities across and within America's communities;
- (b) the methods by which users initiate the request for assistance—be that by way of a telephone call, text, or other defined mechanisms;
- (c) the call-taking, call-handling, and dispatching procedures; and
- (d) the response—be that by virtual or on-scene traditional (i.e., EMS, fire, or police) and/or other sectors of the first responder ecosystem.

We have also compiled an extensive glossary of relevant terms that may provide additional context, which can be found in Appendix A.

## Origin of Transform911

Transform911 was launched to chart a path towards a 911 system that equitably and reliably increases access to wellbeing for those who need emergency assistance, the professionals who staff 911, and those deployed to respond. This initiative builds on years of foundational work by members of the University of Chicago Health Lab, and other practitioners and researchers, and where research did not exist, we highlighted opportunities for further exploration and generated information through our collaborative workgroup process.

Though this blueprint is informed by existing research,<sup>12</sup> we recognize that this field is lacking evidence, so we also capitalized on the expertise of our community of practice. The Transform911 effort brought together relevant research and over 100 critical stakeholders with diverse experiences and perspectives in a two-year-long process to develop a blueprint for needed change. Stakeholders in this community of practice included experts from across the country, including 911 professionals, academics, community advocates, government agencies, public safety leaders, people impacted by the criminal justice system, and technology specialists to develop unified recommendations for a transformed 911. The blueprint is a culmination of this work and is a consensus document outlining a vision for a 911 system that lives up to its immense potential and the actions we must take to arrive there.

Our efforts were divided into six workgroups, headed by dedicated co-chairs as listed below. For our complete membership roster, see Appendix B.

### 911 Professional Career and Supports

George Rice, *Managing Partner, Skyhawk Global*

Lora Ueland, *Executive Director, Valley Communications Center 911, Kent, WA*

### Alternative First Responders

Sean Goode, *Executive Director, Choose 180*

Gabriel Rodriguez, *Chief of Police, Camden, NJ*

### 911 Hotline Alternatives

Jasmine Desiderio, *Deputy Director of Albuquerque Community Safety Department, Albuquerque, NM*

Moki Macias, *Executive Director, Policing Alternatives & Diversion, Atlanta, GA*

Mary Naoum, *Crisis Response Design Consultant, Policing Alternatives & Diversion Initiative, Atlanta, GA*

---

<sup>12</sup> For a review of the research that informed this blueprint and the Transform911 process, see Transform911: Assessing the Landscape and Identifying New Areas of Action and Inquiry, <https://www.transform911.org/resource-hub/transforming-911-report/>.



Mariela Ruiz-Angel, *Director of Albuquerque of Albuquerque Community Safety Department, Albuquerque, NM*

## Emergency Communications Center Operations

Edwin F. Huellstrouk, *RN, BSN, NREMT-Paramedic, ECRN, TNCC, CEN, Emergency Room Nurse for Edward-Elmhurst Hospital in Naperville, IL*

Chad Kasmar, *Chief of Police, Tucson, AZ*

Tyrell Morris, *Executive Director, Orleans Parish Communication District, New Orleans, LA*

## 911 Governance

Jerry Clayton, *Sheriff, Washtenaw County, MI*

Stephanie Olson, *Strategic Planning & Performance Manager, Raleigh, NC*

Jeanne Milstein, *Director for Human Services, City of New London, CT*

## 911 Technology and Infrastructure

Michael Cowden, *Director of Solutions Engineering, Code for America*

Evonne Silva, *Senior Director, Criminal Justice, Code for America*

Meredith Horowski, *Senior Director, Network, Code for America (former co-chair)*

Over the course of eight months, these workgroups met biweekly via zoom to discuss 911 professionals, alternative hotlines, alternative first responders, ECC operations, governance, and technology as they pertain to the 911 system. In addition to those engaged formally in the workgroup efforts, we reached out to those with specialized interest and expertise in 911, including people who critically challenged the vision that we were proposing, and engaged them in the process through presentations, opportunities to serve on workgroups and weigh in on their formation, invitations to share feedback on draft recommendations, and other aspects of the initiative. These stakeholders served as reactors, educators, and collaborators. Ultimately, the Transform911 team synthesized this collaborative and constructive feedback, including some strong critiques, and developed this blueprint with seven essential recommendations to transform 911, described below.

Following this overview, we provide a chapter for each recommendation with more discussion and detailed, deeply considered action steps necessary to advance that recommendation, reflecting the culmination of each workgroup's efforts, as well as national feedback and input.

For any given reader, some of these recommendations and action steps may feel resonant, others less so. You may even initially disagree with some of them. This blueprint serves as an invitation for leaders and other interested parties who recognize the importance of 911 in their communities to join us in aiming for Transform911's north star, through considering and working to implement the following recommendations.

## **Transform911's Seven-Point Plan:**

### **1. (Re)Introducing 911**

*Everyone knows the number, almost no one knows how it works.*

### **2. Putting the People in 911**

*Community partnership is essential to a 911 system that works for everyone.*

### 3. Advancing the Workforce

*There's no 911 without a recognized, supported, professional workforce.*

### 4. Making 911 Independent and Equal

*ECCs that are independent and equal to other local first response systems help improve equitable outcomes.*

### 5. Ensuring the Right Response at the Right Time

*A diverse ecosystem of responses reduces our reliance on the police by default.*

### 6. Strengthening Data and Tech Standards

*Reliable and ethical data and tech improves responses.*

### 7. Securing National-Level Support (for 911)

*Effective, equitable emergency response locally requires unequivocal support federally.*

## Next Steps

The goal of this blueprint—and the related convening—is that it will immediately be acted upon by the developers themselves and will not be a report that sits on the shelf. We intend for the recommendations to be adopted by the existing Transform911 community of workgroup co-chairs, members, partners, and advisors and for this community to expand to include a wider group of adopters and interested parties. This effort is truly “co-owned” collectively by the Transform911 workgroup co-chairs and members who developed the content and provided the ambition and expertise necessary to establish the recommendations presented here. The Transform911 workgroup co-chairs and members have and we expect will continue to serve as vital ambassadors and leaders for the work and will help push for the implementation of the Transform911 Blueprint’s recommendations in their communities.

On June 29, 2022, this blueprint will be released publicly during a third Transform911 convening. The one-day public event will be hosted both virtually and in person in New Orleans, in partnership with the Orleans Parish Communications District Emergency Communications Center.<sup>13</sup> The convening will be open to the public and all Transform911 stakeholders, funders, members of the media, and federal and state representatives and staff. The event will unveil this blueprint, showcase relevant early examples of applied recommendations, and present plans and opportunities for implementation. The recording and other related materials for the event will be available online on the Transform911 website, under the [convenings page](#). This blueprint marks a milestone in the transformation process, invites others into changes that are already gathering steam via the workgroup's consideration process, and to also raise the profile of the work.

---

<sup>13</sup> The Orleans Parish Communications District ECC is the 911 Center that serves New Orleans, Louisiana.





## Acknowledgements and Attributions

Developing a set of comprehensive, relevant, and achievable recommendations for a system as complex as 911 is not a solitary enterprise. The Transform911 team approached this task through a consensus model where recommendations would be developed by a large group of people representing many diverse perspectives. The individuals, entities, and perspectives we name below were selected through a snowball process where University of Chicago team members and our partners at the Full Frame Initiative (FFI), as well as our advisors and professional contacts, were asked to identify individuals who might be interested in coming together for an intensive eight-month-long collaboratory where strategies for how to transform the 911 system would be lifted up and examined through multiple lenses. We also invited participation through an inaugural Transform911 convening, held in September 2021 and in the days thereafter.

The backbone of the consensus model was six workgroups headed by two or more co-chairs that focused on key topic areas: 911 professionals, ECC operations, alternative hotlines, alternative first responders, 911 technology and infrastructure, governance, and research. In total, the workgroups engaged more than 130 individuals with diverse expertise: 911 professionals; 911 ECC leaders; researchers; leaders in organizations representing the best interests of 911 professionals; technologists; community activists; mental health and substance use professionals; federal, state, and local government staff; and providers of community-based alternatives to 911, including alternative hotlines. Workgroups met two times a month over seven months via Zoom to articulate the current state of their topic areas, desired goals, barriers and ways to overcome them, and, ultimately, recommendations for achieving identified goals.

We also wish to acknowledge the inspiration of the many civil rights and behavioral and mental health leaders and activists upon whose work this blueprint builds on, who have devoted their lives to raising up the power of Black and brown people as well as individuals impacted by behavioral and mental health crises, and the representatives of these fields who participated in and provided feedback on the recommendations. We are also grateful to the dedication of advocates for people with disabilities.

We are indebted every day for the professional and compassionate response of so many 911 professionals and other first responders, including alternative responders, who meet the needs of those who call for help and who have inspired and informed this work.

We are grateful to everyone who contributed to this consensus blueprint in ways big and small. The list of contributors is long, and we very much hope that we've acknowledged every one of them. If we've missed you, please accept our apologies and know that it wasn't intentional.

### **A. Blueprint authors**

While Transform911 is led by Principal investigator S. Rebecca Neusteter, we want to acknowledge the outstanding work of the Transform911 staff and advisors, FFI staff, and workgroup co-chairs and members who synthesized the more than 50 recommendations and wrote substantial sections of this blueprint. In addition to the workgroup co-chairs and members, these individuals include, in alphabetical order: Sara Hayden, Madge Haynes, Matthew Leger-Small, Jason Lerner, Melissa Reuland, Sarah Scaffidi, Katya Smyth, Amy Spellman, and Natalie Warren.

**B. Non-author contributors**

This blueprint has also relied on the dedication and expertise of University of Chicago Health Lab faculty and staff, including Faculty Director David Meltzer, Co-Faculty Director and Transform911 Co-Principal Investigator Harold Pollack, as well as Health Lab Coordinator Amy Acevedo-Carrasco.

In partnership with the Health Lab, FFI facilitated the workgroup process, pulled together the thoughts and ideas of workgroup members, and supported the work of this effort in innumerable ways over the past year. In addition to the blueprint authors, these individuals also include former Transform911 senior advisor, Nancy La Vigne, as well as Leoson Hong Cheng Hoay, Marilyn Sinkewicz, Katrina Feldkamp, Isabel Levin, Cree Medley, Lesly Andrea Chávez, Samuel Wells, Bhargavi Thakur, Opeoluwa Falako, Amber Thomas, Amy Szkorla, Shreya Vallampati, and Prabhav Kamojjhala.

We are inordinately grateful to the following individuals who crafted the more than 50 recommendations that formed the basis of this blueprint. They committed a tremendous amount of time sharing their views both during meetings and outside them and expended significant social capital to represent as much as possible the interests of those in their professional or personal networks. Each workgroup co-chair and member was focused on the goal of a 911 system that prioritizes wellbeing for those who work in the system as well as for those who rely on it, and we are inspired by their work. This membership list with short biographies is included in Appendix B.

**911 Professional Career and Supports**Co-Chairs

George Rice, Managing Partner, SkyHawk Global

Lora Ueland, Executive Director, Valley Communications Center 911

Members

Jill Baldassano, Senior Manager, SkyHawk Global

Jeremy Hill, 911 Center Co-Manager, Amarillo, TX

Yolanda L. Lewis, Executive Vice President, Justice and Health, Meadows Mental Health Policy Institute

Monica Million, 9-1-1 Business Development Manager, Amazon Web Services

Keris Myrick, Director at JED Foundation/Co-Director S2i (The Mental Health Strategic Impact Initiative)

Bob Patterson, Executive Director, Mercy EMS Springfield Communities

Tiffany Russell, former Project Director, Mental Health and Justice Partnerships, The Pew Charitable Trusts

Brian Scott, Principal, BDS Planning & Urban Design

Jeff Streeter, Executive Director, Jefferson County Communications Center Authority

Adam Timm, Consultant and Founder, The Healthy Dispatcher

Ashley Tjaden, Business Services/Equity & Diversity Coordinator, Bureau of Emergency Communications (9-1-1)

Vikki Wachino, Principal, Viaduct Consulting

Kim Westcott, Senior Program Officer, Criminal Justice Grantmaking, Charles and Lynn Schusterman Family Philanthropies

Wes Wright, Executive Director, Next Generation 911 Institute

Research Delegates

April Feng, Senior Analyst, Center for Radical Innovation for Social Change at the University of Chicago



Lois James, Assistant Dean of Research, Washington State University College of Nursing  
Michelle Lilly, Professor of Clinical Psychology, Northern Illinois University  
Jim Marshall, Co-Founder, 911 Training Institute

## **Alternative First Responders**

### Co-Chairs

Sean Goode, Executive Director, Choose 180  
Gabriel Rodriguez, Chief of Police, Camden, New Jersey

### Members

Rebecca Brown, Owner and President, Further The Work  
Joseph Cortez, Associate Professor, University of Southern California  
Katie Camp, Senior Program Manager at The Policing Project, New York University School of Law  
Brendan Cox, Director of Policing Strategies, LEAD Support Bureau  
Dolores (D.C.) Ernst, Program Administrator for Community Assistance Program, City of Phoenix  
Naji Fenwick, Program Manager, Vital Strategies  
David Heppard, Executive Director, Freedom Project Seattle  
Daniel Kornfield, Executive Director, Dignity Best Practices  
Lionel King, Program Specialist, Law Enforcement Action Partnership  
India Hayes Larrier, State Advocacy Manager, Community Catalyst  
Janelle Marcellis, Police Commander, University of Chicago  
Matthew Moody, Director, Contact Center Operations at Crisis Response Network  
Brianna O'Steen, PhD, Senior Public Policy Associate, Mark43  
Emily Perish, Co-Founder, Comprehensive Care Institute  
Matt Perkins, Program Director, Local Initiatives Support Corporation  
Monika Witt, Policy Manager, National Council for Mental Wellbeing

### Research Delegates

Amir Chapel, Policy Analyst, National Institute for Criminal Justice Reform  
Aili Malm, Professor of Criminology and Criminal Justice, California State University, Long Beach  
Amy Watson, Professor, Helen Bader School of Social Welfare, University of Wisconsin-Milwaukee

## **Emergency Communication Center Operations**

### Co-Chairs

Edwin F. Huellstrouck, RN, BSN, NREMT-Paramedic, ECRN, TNCC, CEN, Emergency Room Nurse  
Chad Kasmar, Chief of Police, Tucson, Arizona  
Tyrell Morris, Executive Director, Orleans Parish Communication District

### Members

Alicia Atkinson, Quality Assurance and Training Coordinator, Regional Emergency Dispatch Center, Northbrook, IL  
Martin Bennett, Executive Director, Cook County Sheriff's Police 911 Center  
Ron Bruno, Executive Director, CIT International  
Bill Duggan, Director, FreeCom Dispatch Center, Florence, Colorado  
Donna L. Carrell, Training Manager, Northeast Oklahoma Enhanced 911 Trust Authority  
Don Champley, Deputy Director, Regional Emergency Dispatch (RED) Center  
Margaret Fine, Chair, Mental Health Commission for the City of Berkeley, California

Audace Garnett, Technology Safety Project Manager, Safety Net at The National Network to End Domestic Violence  
Kelle Hall, Communications Manager for the Town of Highland Park, Texas  
Kim Lettrick, Communications Manager, Southeast Communications Center  
Erica Olsen Shaver, Safety Net Project Director, National Network to End Domestic Violence  
Carlena Orosco, Research and Planning Supervisor, Tempe Police Department, Arizona  
Rick Pegues, Public Safety Communications Coordinator, Tucson, Arizona  
Richard Ray, ADA Technology Access Consultant  
Tony Ruffin, Co-Founder, Pillars and Bridges  
Joe Smarro, Chief Executive Officer, SolutionPoint +, LLC  
Kate Vander Wiede, Crisis Response and Prevention Project Manager, Allegheny County Department of Human Services

## Research Delegates

Brian Aagaard, Research Analyst, RTI International  
Jessica W. Gillooly, Assistant Professor of Sociology & Criminal Justice, Suffolk University  
Jeremiah Johnson, Researcher; LEAD Scholar; Sergeant, Darien Police Department  
Rylan Simpson, Assistant Professor of Criminology, Simon Fraser University

## **911 Governance**

### Co-Chairs

Jerry Clayton, Sheriff, Washtenaw County, Michigan  
Stephanie Olson, Strategic Planning & Performance Manager, Raleigh, North Carolina  
Jeanne Milstein, Director for Human Services, City of New London, CT

### Members

Kurt August, Interim Director for the City of Philadelphia's Office of Criminal Justice  
Peter Beckwith, General Counsel, South Sound 911  
Timothy Bergel, Director of Support Services, Cook County Sheriff's Police  
Ben Borchers, 911 Triage Project Manager, City of Philadelphia's Office of Criminal Justice  
Daryl Branson, State 911 Program Manager, Colorado Department of Regulatory Agencies  
Richard Collins, Director of Emergency Services, Sarasota County Government  
Chris Fisher, Senior Advisor to the Assistant Attorney General, US Department of Justice  
Kris Henderson, Executive Director of Amistad Law Project  
Jason Hernandez, Executive Director of Intergovernmental Relations, Cook County Sheriff's Department  
Sally Lawrence, E911 Coordinator, Sarasota County Public Safety Communications  
Tad McGalliard, Director for Research, Development, and Technical Assistance, IBM Center for the Business of Government  
Paul Noel, Chief, Knoxville, TN, Police Department (as of June 2022), former Deputy Superintendent, Investigations and Support Bureau, New Orleans Police Department  
Shannon Scully, Senior Advisor, Justice & Crisis Response Policy, National Alliance on Mental Illness  
Susan Shah, Managing Director, Trinity Church Wall Street  
Cornelia Sigworth, Supervisory Program Manager (Associate Deputy Director), Bureau of Justice Assistance  
Evonne Silva, Senior Director, Criminal Justice, Code for America  
Anise Vance, Assistant Director, Community Safety, Durham, North Carolina  
Ken Zimmerman, Founder and Co-Director, Mental Health Strategic Impact Initiative (S2i)



## Research Delegates

Roseanna Ander, Executive Director, University of Chicago Crime Lab and Education Lab  
Ayesha Delany-Brumsey, Director, Behavioral Health, The Council of State Governments  
Jesse Jannetta, Senior Policy Fellow, Justice Policy Center, Urban Institute  
David Muhammed, Director, The National Institute for Criminal Justice Reform (NICJR)

## **911 Hotline Alternatives**

### Co-Chairs

Jasmine Desiderio, Deputy Director of Albuquerque Community Safety Department, City of Albuquerque, New Mexico  
Moki Macias, Executive Director, Policing Alternatives & Diversion  
Mary Naoum, Crisis Response Design Consultant, Policing Alternatives & Diversion Initiative  
Mariela Ruiz-Angel, Director of Albuquerque Community Safety Department, City of Albuquerque, New Mexico

### Members

Victor Armstrong, Chief Health Equity Officer, North Carolina DHHS  
Phil Ashlock, Director of Data & Analytics, GSA Technology Transformation Services  
Martin Bennett, Executive Director, Cook County Sheriff's Police 911 Center  
Tim Black, Director of Consulting (former), White Bird Clinic  
Greg Bloom, Founder, Open Referral Initiative  
David Covington, CEO & President, RI International  
Vinny Eng, Director of Policy and Advocacy, Safer Together SF Bay Area  
Susan Frankel, Chief Executive Officer, National Runaway Safeline  
Kevin Hall, Assistant Chief, Tucson Police Department, Arizona  
Richard LaPratt, 211 Database and Technology Director, United Way of Southwestern Pennsylvania  
Jason Renaud, Program Coordinator, Law & Mental Health Conference  
Raymond Schwartz, Co-President, NAMI New York City Metro  
Jaime D. Young, Consultant, Mission Critical Partners, LLC

## Research Delegates

Amir Chapel, Policy Analyst, National Institute for Criminal Justice Reform  
Soledad McGrath, Executive Director, Northwestern Neighborhood & Network Initiative (N3)  
Amy Watson, Professor, Helen Bader School of Social Welfare, University of Wisconsin-Milwaukee

## **911 Technology and Infrastructure**

### Co-Chairs

Michael Cowden, Director of Solutions Engineering, Code for America  
Meredith Horowski, Senior Director, Network, Code for America  
Evonne Silva, Senior Director, Criminal Justice, Code for America

### Members

Jim Bueermann, Retired President, National Police Foundation  
Brian Dunkle, Regional Sales Manager, Deccan International  
Christine Gardiner, Professor of Criminal Justice, California State University, Fullerton

## TRANSFORM911

Ben Horwitz, Co-Founder, AH Datalytics  
Jerry Hall, Founder, Civic Mapping  
Billy Lim, Formerly Senior Organizer with Code for America  
Kevin Miller, Director of Strategic Partnerships, Microsoft Justice Reform Initiative  
Micah Mutrux, 911 National Action Team Program Manager, Code for America  
Katherine Nammacher, Product Manager, User Researcher, and Professor  
Jesse Niwa, Deployment Engineer, SPIDR  
George Rice, Managing Partner, SkyHawk Global  
Scott Sobotka, Primary Consultant, Pragmatica, LLC  
Sema Taheri, Director of Research Operations, Measures for Justice

### Research Delegates

Loren Atherley, Director of Performance Analytics & Research, Seattle Police Department  
Jake Cramer, Senior Researcher, Policing Analytics and Strategy, RTI International  
Robin Engel, Professor of Criminal Justice, University of Cincinnati  
Dave McClure, Senior Principal, Police Executive Research Forum

### **C. Reactors: Colleagues, online polling, chat logs, and submissions**

In addition to the workgroup co-chairs and members, who helped craft and provided significant feedback on the development of both the recommendations and this blueprint, the Transform911 team invited individuals and organizations to have the opportunity to provide input on the recommendations as they became available. Other reactors volunteered feedback through submissions to an online form contained on the Transform911 website. Some of these reactors include Congresswoman Norma Torres; Martine Caverly; Vinnie Cervantes; Yana Calou; Dan Gorenstein; Jac Charlier; Erica Bond; Diane Wachtell; the National Association of State 911 Administrators Board of Directors and members; the NG911 Institute Board; National Emergency Number Association; the Association of Public-Safety Communications Officials International; current and former members of federal, state, and local government; and members of organizations that serve their marginalized communities with appropriate and culturally informed resources. The Transform911 team also shared an early draft of the recommendations with the public through a virtual convening held in March 2022, where attendees could react in the chat or through online polling exercises. The recommendations presented at that convening are included in Appendix D. The convening and related content are [available on the Transform911 website](#). Immediately following the March 2022 convening, members of the public were directed to a feedback form on the Transform911 website that captured reactions to the recommendations individually and collectively.

The Transform911 team considered every piece of feedback received and shared it with workgroup co-chairs and members to determine how best to address the input. Detailed summaries outlining the feedback received, by the various inputs, are contained in Appendix E. We learned a great deal about pain points in the recommendations as well as areas of agreement and are indebted to the individuals who took time to consider this work and share their viewpoints. We thank the many 911 professionals who devoted time to reviewing the recommendations and providing comments. Their input was important and enlightening.

### **D. Key partner organizations and contributors**

Early in the planning of this work, the Transform911 team recognized the need to address not only the

criminal justice aspects of transforming the 911 system but also the health and wellbeing components. We were elated that the remarkable staff at the [Full Frame Initiative](#) (FFI) were able to partner with us and bring their laser-like focus on wellbeing. FFI's commitment to the maxim that everyone should have "a fair shot at wellbeing" is particularly apropos to this work as we strive to bring the professionals that make the 911 system run and the people in crisis the assistance they need. FFI staff guided the workgroup process, developed a path and techniques to foster innovative solutions, wrote sections of reports, and conceptualized convening programs. This work would not have been possible without them, and we are all enriched by their partnership.

Another key organization that propels this work forward into practice is [Code for America](#) (CfA). CfA has partnered with Transform911 in a variety of important ways. Several staff members co-chaired the 911 technology and infrastructure workgroup and helped draft the related recommendations. Furthermore, staff on the Program and Technology team identified the issue of needed changes in the 911 system and brought it to their large group of volunteers through the 2021 National Day of Civic Hacking and the National Action Team. These volunteers contributed case studies of initiatives and data visualization tools and are collaborating on data collection from ECCs. This enthusiastic and dedicated group of staff and volunteers has energized many others across the country, and we are thrilled to see these efforts grow under their leadership in the future.

The genesis of this work has always been a commitment to addressing the race disparity that can plague the criminal justice system response to people in crisis. We reached out to the Black Belt African American Genealogical and Historical Society (BBAAGHS) to partner with us to dig deeply into the origins of the 911 system to better understand how that history manifests today. On behalf of Transform911, BBAAGHS conducted primary research to create a People's History of 911, which sought to assess the historical role of early 911 systems in Haleyville, Alabama—where the first 911 call was made—and the other areas of the state. BBAAGHS's oral history research was critical to creating this blueprint, and we so appreciate learning from their voice and the voices of Alabama's Black Belt community members interviewed for their research.

The effort was extensively supported by McCabe Message Partners, who shepherded us through three major convenings and many marketing and publicity decisions in between. Their staff are talented and imaginative, and we are thankful for their able handling of these events and the initiative's messaging.

We are joined in this work by accomplished organizations that share the goal of transforming the 911 system, as well as finding solutions for some of our nation's most pressing challenges. These organizations include the Research Triangle Institute (RTI) in North Carolina and the Policing Project at New York University in New York. Staff at RTI and the Policing Project have served as sounding boards, participated on workgroups, and reviewed drafts of this blueprint and other related products. Their astute insights and comments have made this work more relevant and salient.

Finally, we also want to thank the University of Chicago's Harris School, particularly Dean Katherine Baicker; David Stone, Senior Director of Communications and Public Affairs; Jodi Daily, Senior Director of Events; Bevis Pardee, Senior Director of Information Technology; Leonard Brashear, Website Administrator; Erin Keane Scott, Marketing Director; Keri O'Mara, Graphic Designer; and Debra Gay, Director of Human Resources; as well as Roseanna Ander, Executive Director of the Urban Labs Crime and Education Labs; Alaina Beverly, Assistant Vice President for Urban Affairs, Office of Federal Relations; and Trudy Vincent, Associate Vice President for Federal Relations, Office of Federal Relations;

along with their amazing teams for their extraordinary partnership and counsel and support throughout the duration of this blueprint's development.

**E. Funders**

We are thankful to Arnold Ventures and their current and former staff, Jeremy Travis, Walter Katz, Asheley Van Ness, Anita Ravishankar, Marc Krupanski, Catie Bialick, and Nikki Smith-Kea. In addition to the significant support, they have provided to the Transform911 effort, Arnold Ventures provided important early leadership and support in the 911 space more broadly. We are also grateful to other Transform911 supporters, including Microsoft's Justice Reform Initiative and current and former staff, namely Merisa Heu-Weller, Kevin Miller, Elizabeth Grossman, and Shiqueen Brown; the Sozosei Foundation, notably Melissa Beck; and Charlotte Wagner and the Wagner Foundation.





# Chapter One: Introducing Transform911

Across America, at least 240 million calls are made to 911 each year. Many of these result in timely responses from a dedicated group of 911 professionals to medical emergencies, fires, and serious crimes in progress. This everyday excellence—24 hours a day, 365 days a year—is a remarkable, often lifesaving accomplishment. Indeed, 911 professionals are true first responders.

Fundamentally, the only thing most people in the United States know about the 911 system is to call it in an emergency,<sup>14</sup> or when you are simply out of options to solve the issue at hand.<sup>15</sup> The levels of systemic complexity are hidden from view and from consideration, as is the dedicated 911 professional workforce; 911 doesn't enjoy the broad public recognition that other first responder systems have; it is often conflated with policing.<sup>16</sup> As we will describe and offer solutions for, that 911 is under the radar screen, which has impacted research, reform, funding, staffing, and evolution of the system. This has profound implications for 911 delivering on its promise, impacting the health and wellbeing of people across America.

Mismatches between need and response confound communities and responders alike. Existing data indicate that most 911 calls are not related to a crime in progress, yet they still elicit a police response (this will also be explored in subsequent sections). As a result, police spend much of their time responding to low-level and non-criminal incidents that do not amount to public safety or health emergencies. Not by choice, police officers have become first responders to all manner of societal ills, including family and mental health crises, conflicts in schools, and “quality-of-life” offenses such as public intoxication and panhandling. This “police-first” emergency response model may exacerbate harm and perpetuate distrust in the justice system among many communities—especially those of color.

Instead, Transform911 envisions a 911 system that equitably and reliably increases access to wellbeing for those who need emergency assistance, the professionals who staff 911, and those deployed to respond. We build on the extraordinary and positive innovations in the field to address the challenges and inequities that are within our reach and control, recognizing that the change we envision cannot happen without shifts in the systems and communities 911 serves.

We emphasize here that the recommendations being put forth by this blueprint support the increased need for police as well as other first responders, including 911 professionals, fire, and EMS, during the present rise in violent crime and, in particular, gun crime. In fact, these recommendations will increase the time that police and other first responders can dedicate to important problems like violent crime by reducing the time they spend responding to other types of calls, such as those involving mental or behavioral health crises. This not only helps to prioritize the most appropriate responses to where they are needed but also does so more efficiently and equitably.

---

<sup>14</sup> E.g., <https://www.verywellhealth.com/how-911-works-1298365>; <https://www.cityofrochester.gov/article.aspx?id=8589935579>

<sup>15</sup> Cynthia Lum et al., “Constrained Gatekeepers of the Criminal Justice Footprint: A Systematic Social Observation Study of 9-1-1 Calltakers and Dispatchers,” *Justice Quarterly* 37, no. 7 (2020): 1176-1198, <https://doi.org/10.1080/07418825.2020.1834604>

<sup>16</sup> The dearth of reports and research on this issue is a testament to the lack of attention paid to the 911 system as separate from policing.

How we came to this vision and the action plan for moving toward it, are described below.

## Laying the Foundation

Transform911 builds upon years of complementary foundational work, both by members of the University of Chicago Urban Labs, Health Lab and Crime Lab, and other practitioners and researchers. These building blocks include knowledge on 911 itself, alternatives to arrest, data-driven justice, emergency crisis response, and understanding of low-level and misdemeanor arrests. Some of these contributions came from a seminal 911 convening on July 30, 2019, facilitated by current members of the Health Lab, who also conducted the related research.<sup>17</sup> The convening employed the time-honored roundtable format, wherein participants in an interdisciplinary consortium, who had not previously collaborated, generated new and promising policies and ideas to improve 911 service quality, worked toward organizational efficiency and community safety, and laid the foundation to affect meaningful change in this space.<sup>18</sup>

Several months later, the seeds of Transform911 began to grow, and an overarching goal came into focus. We sought to gather the best available evidence to explore how the nation's 911 system can better prioritize health and safety, ensure the right responder is dispatched at the right time, and identify and disseminate best practices to improve first response based on existing and emerging research. Through this process, it was vital to us that we work toward several strategic objectives to build upon the success of that initial convening and the foundational research that preceded it; expand the conversation to a broader and more sustained collection of stakeholders, many of whom have been previously excluded from such dialogue; generate even greater momentum toward transformative change; and produce a fuller and more thorough, specific body of recommendations.

## A NOTE ON TERMINOLOGY

We employ language that may differ from standard vernacular used in the field. Namely, at the request of the Transform911 co-chairs and members, we use the term **911 professionals** rather than telecommunicators. The workgroup co-chairs and members believe this term better reflects both the role and credibility of these key personnel, especially in light of the complexity of their jobs and the distinct and invaluable role they play in society. Wherever possible, we similarly refer to 911 call centers as **Emergency Communications Centers (ECCs)**, a term favored by many 911 professionals in lieu of the more traditional term, Public Safety Answering Points (PSAPs).

Transform911 is focused on creating a comprehensive “**first responder ecosystem**” that includes 911 professionals, police, fire, and EMS responses, but not solely them. This term is being used alongside “alternative” responders in the recommendations that follow. This “first responder ecosystem”

1. Includes responders who encounter the same or similar threats, challenges, and exposure to trauma that EMS, fire, and police do when responding to people in the midst of an emergency.
2. Can be deployed by 911, 311, or can exist in the community for people in crisis to outreach directly through hotlines or other means.
3. Includes responses from community-based organizations that provide treatment and support to people in crisis, people who experience homelessness, people who are in conflict with one another, and people with mental health and/or substance use challenges.
4. Includes both virtual support and in-person responses.

<sup>17</sup> S. Rebecca Neusteter et al., “Understanding Police Enforcement: A Multicity 911 Analysis,” Vera Institute of Justice, September 2020, <https://www.vera.org/publications/understanding-police-enforcement-911-analysis>.

<sup>18</sup> Ibid.

The University of Chicago Health Lab launched Transform911 in July 2020, supported by a diverse group of philanthropies, including Arnold Ventures, Microsoft’s Justice Reform Initiative, and the Sosozei Foundation. From the summer of 2020 through spring 2021, the Health Lab looked to 911 practitioners, scholars, and additional stakeholders such as municipalities, community members, advocates, and others, to establish an ambitious and novel approach to creating a community-informed, evidence-based blueprint for system transformation.

During this time, the demand to improve policing was spreading rapidly across the country, as evidenced by the cases of George Floyd, Elijah McClain, and Tamir Rice. While many in the general public do not differentiate between policing and 911, so calls for change tend to erroneously conflate these two systems, there was nonetheless a growing call to examine and improve the 911 system as well.<sup>19</sup> Parsing the role of the 911 *system* and the limited options for response and dispatch available to 911 professionals provides a window into options for transformation that could save additional lives and improve the wellbeing of 911 professionals often caught between callers and police.

Before diving into examples, however, it is important to stress that 911 professionals<sup>20</sup> have intervened and provided key information that has saved countless lives. At the same time, when there are opportunities to save more lives, we have a collective responsibility to learn and shift.

Tamir Rice, Elijah McClain, and George Floyd’s deaths came after calls to 911 were made by third parties attempting to dispatch police by inaccurate reports that the people involved, and ultimately killed, were engaging in criminal activities. Each case, however, illuminates a different challenge—and opportunity—facing 911.

Police are dispatched when there is a report of criminal activity. Minor and nonviolent situations can escalate quickly in these cases. This reality brought home to many through the May 2020 murder of George Floyd<sup>21</sup> by Minneapolis police officers. Police were dispatched because a \$20 counterfeit bill being used to purchase cigarettes is a potential criminal offense. The resulting use of deadly force marked a turning point for the United States. What is less well known—and particularly salient for this effort—is that a 911 dispatcher, who witnessed Mr. Floyd’s murder in real time through live surveillance

---

<sup>19</sup> The prominence and proliferation of these discussions and demands is evidenced by voluminous media coverage, national protests, and rapid development of initiatives that began during this time and have continued through the time that this blueprint was published. Several such early media accounts include: “Want to Fix Policing? Start with a Better 911 System” published in Vox by Roge Karma, August 10, 2020, <https://www.vox.com/2020/8/10/21340912/police-violence-911-emergency-call-tamir-rice-cahoots>; “What the Data Say About Police Brutality and Racial Bias—and Which Reforms Might Work” published in *Nature* by Lynne Peeples, June 19, 2020, <https://media.nature.com/original/magazine-assets/d41586-020-01846-z/d41586-020-01846-z.pdf>; Wall Street Journal, The Saturday Essay, “The Long Reach of Racism in the U.S.: Despite Great Progress Across Two Centuries, Exclusion and Injustice Remain the Reality for Too Many Black Americans” by Orlando Patterson, published in the Wall Street Journal, The Saturday Edition, June 5, 2020, <https://www.wsj.com/articles/the-long-reach-of-racism-in-the-u-s-11591372542>.

<sup>20</sup> The term “911 professionals” is used to include operators, call takers, call handlers, dispatchers, and managers in Emergency Communications Centers (ECCs) throughout the report. Workgroup members chose this term to emphasize the professional nature of these jobs.

<sup>21</sup> A convenience store clerk called 911 and reported that a customer, who later was reported to be 43-year-old George Floyd, had used a “fake” \$20 bill to purchase cigarettes. This 911 call resulted in the deployment of Minneapolis police officers. Mr. Floyd was confronted by an officer at gunpoint, and then forcibly removed from his car, and cuffed with arms behind his back. Mr. Floyd fell to the ground. He was then both pushed in and removed from a police vehicle, ultimately, he was forced to lay face down on the pavement, where he was suffocated by police officers applying pressure to his neck, torso, and legs. Mr. Floyd’s death was ruled a homicide. 911 professionals were involved in this incident in multiple ways and at multiple times, including taking the original call, dispatching police and subsequent EMS and fire resources.

footage, contacted a police supervisor to express concern and reported, “You can call me a snitch if you want to[;] . . . all of them sat on this man,” and noted that the officers had failed to report that they were using force and to request the presence of a supervisor, which was in violation of departmental policy.<sup>22</sup> In other words, 911 professionals are often, as was the case here, unequipped to intervene when the downstream handling of a call is inappropriate and dangerous.

That police are dispatched as a default when there is a report of something that the caller may find concerning can also contribute to unwarranted and deadly escalation, even when there is no report of criminal activity and no report of danger or threat. The August 2019 case of 23-year-old Elijah McClain in Aurora, Colorado, is a case in point. A 911 caller reported someone “has a mask on” and is acting “sketchy”; this “might be a good or bad person” but was reported as not visibly carrying any weapons. Indeed, when the 911 professional asked directly if the caller had seen a weapon, the caller replied no. Police are the default responder dispatched to 911 calls for service believed to involve a potential crime or other law enforcement matter in Aurora, as in so many communities; the result is that Mr. McClain, who suffered from anemia and wore a face mask and other attire to stay warm when others may not have needed so many layers, was confronted by police. That he may not have heard their demands because he was listening to music and not doing anything wrong (so wouldn’t expect police to have any reason to confront him) led the police to escalate and involve EMS, who ultimately administered a fatal dose of ketamine.<sup>23</sup>

To be clear, 911 does not determine the actions of police dispatched to a scene. But the 911 system is relied on to provide information that primes the police for what they will encounter upon arrival. A 911 professional is reliant on the information provided by the caller. In the case of 12-year-old Tamir Rice, killed by police in November 2014, there were fundamental problems with the translation of information taken in and then relayed. A third party called 911 to report that someone, who was “probably a juvenile,” was in a park with a gun that was “probably fake.” In deploying the police to this call for service, the 911 call taker failed to relay these key pieces of information, which investigators subsequently ruled as contributing factors to the deadly police shooting.<sup>24</sup>

One uniting factor in these cases is that all three victims were Black males—two men, one boy. Data clearly demonstrate that biased behaviors exist in virtually all spaces, contexts, and people.<sup>25</sup> Empirical research that proves biases specifically in 911 is lacking, but there is no reason nor reasonable explanation for why 911 would be exceptional in this regard. First responders’—*including 911 professionals*—actions may be impacted by implicit or explicit biases or may be triggering for others, as well. Evidence of people misusing the 911 system for discriminatory or biased purposes, knowingly or not, cannot be denied. This has been widely documented through video footage and personal accounts, including those described above. When this is coupled with a systemic default to dispatching police, as

<sup>22</sup> Many media reports and investigatory materials extensively document this incident, see for example:

<https://www.nytimes.com/2020/05/31/us/george-floyd-investigation.html>;

<https://www.cnn.com/2020/05/28/us/minneapolis-george-floyd-911-calls/index.html>; and

<https://www.usatoday.com/story/news/nation/2020/06/16/george-floyd-911-dispatcher-had-concerns-over-cop-kneeled-neck/3197175001/>.

<sup>23</sup> Many media reports and investigatory materials extensively document this incident; see for example:

<https://abcnews.go.com/US/independent-report-deadly-police-encounter-elijah-mcclain-released/story?id=76031754>.

<sup>24</sup> The call taker was subsequently placed on leave. Many media reports and subsequent investigatory materials extensively document this incident; see for example: <https://www.cleveland.com/metro/2017/03/tamir-rice-911-call-taker-susp.html>.

<sup>25</sup> For a review of the research that does exist, what can be extrapolated, and where evidence is lacking, see Transform911: Assessing the Landscape and Identifying New Areas of Action and Inquiry, <https://www.transform911.org/resource-hub/transforming-911-report/>.



we will discuss more below, it means that deployment of lethal force is more common than warranted, jeopardizing the safety of all parties involved. Because of historical and continued potential harm, it is imperative to support our nation's 911 professionals and embrace the fuller first responder ecosystem that offers a wide range of solutions.

Ignoring this reality creates fertile ground for biases to be amplified with each handoff and interaction; addressing bias is essential for saving lives. For while bias isn't unique to the 911 system, the 911 system *is* unique in its ability to dispatch lethal force.

As awareness of the problem has grown, so too has recognition that answers are lacking. While incomplete conclusions can be drawn from human behaviors and viral videos, the current state of 911 offers very few data points and little consistency among standards, practices, and governance structures, as well as many other elements. Data and evidence from alternative strategies are incredibly scarce. As a result, local communities and stakeholders are teaming up to learn from and with each other, along with other interested parties. Such partnerships have yielded precious few promising existing options, and those that do exist are widely held up as exemplar models, absent a definitive evidence base.

As Health Lab began to organize this work, it was clear that interest levels were high. It was less clear, however, what exactly people hoped to learn, gain, and accomplish. In the absence of data or prior research to pull from, in January 2021, Health Lab developed and launched a public survey to assess key questions, opportunities, and challenges facing the field. In addition to answering questions on topics of consideration, respondents were asked to indicate if they were interested in participating in a workgroup and/or knew anyone who might be. The survey and a write-up summarizing the related findings are contained in Appendix C.

### **Creating a Blueprint for Change**

This national context for change, coupled with the ground-laying work done in 2019 and 2020, fueled an ambitious strategy announced in spring 2021: Over a one-year period, Transform911 would engage 100+ stakeholders from around the country to examine the research, learn from promising practices and local pilots, and articulate a highly ambitious and highly reasoned consensus document—this blueprint for 911 transformation. This planning process would build new and important cross-field relationships, spark innovation, and inspire transformative change towards a 911 system that is an equitable gateway to wellbeing—a sense of safety, belonging, purpose, and influence—for callers, 911 professionals, and responders alike. We would draw on evidence and evidence-based practices when and wherever possible and recognize, learn from, and in the absence of empirical evidence, consider practice-based evidence to augment, complement, and inform these efforts.

The January 2021 survey, together with the prior 18 months of research and planning, led to Transform911's workgroup and convening structures, as well as six vital levers for change: knowledge, action, and inquiry pertaining to 911 and emergency crisis response. As the workgroups dug into their charges, new questions emerged that helped refine and deepen these scopes. The themes and their related scopes are as follows:

1. 911 Professional Career and Supports: Reviewed successful and promising efforts to improve investments in and supports for the 911 profession around skill set requirements, recruitment and retention, training and certification standards, occupational supports, opportunities for advancement, pay and benefit equity, mental health and wellness needs, and occupational

reclassification/title change (e.g., change classification from “clerical/secretarial administrative” within the Bureau of Labor Statistics to “public safety” umbrella).

2. Alternative First Responders: Reviewed successful and promising practices that provide people with appropriate medical, social service, and community resources to complement or supplant traditional police, EMS, and fire first-response, including responses to mental and behavioral health challenges, false alarms, animal control, some domestic violence/intimate partner violence calls, traffic, noise, and other concerns that often occasion 911 response.
3. 911 Hotline Alternatives: Examined the strengths and limitations of crisis lines, or “hotlines,” including 211, 311, 988, and text lines, along with runaway, domestic violence, and suicide prevention hotlines, aimed at ensuring medical, social-service, and community alternatives to calling 911.
4. Emergency Communications Center (ECC) Operations:<sup>26</sup> Reviewed 911 call-handling operations, including call-taking, triaging, and dispatching protocols. Examined ECC operational structures, accountability mechanisms, quality assurance, and stakeholder engagement strategies and assessed how related policies, procedures, and protocols best promote accessible, appropriate, safe, and equitable responses to requests for emergency services.
5. 911 Governance: Reviewed governance structures and processes (including laws and state and local budget considerations/resource constraints, agency operational orders, organizational and decision-making structures, and reporting protocols) to ensure proper quality control, oversight, implementation, and operation of standardized 911 and alternative procedures.
6. 911 Technology and Infrastructure: Reviewed how technology impacts 911 call systems’ capacity and practical effectiveness in identifying callers’ needs and addressing these needs through the right response, at the right time, by the right responder and seeks to identify specific areas in which improved technology infrastructure and resources might improve public safety and health outcomes.

These six levers, or “themes,” also defined the literature review scopes and provided the coding scheme for resources housed on the Transform911 website,<sup>27</sup> including but not limited to the “911 Initiatives” interactive visualization tool. The themes offered specific focus areas for each workgroup, as well as extensive literature reviews examining each area in depth. Published in February 2022, [“Transforming 911: Assessing the Landscape and Identifying New Areas of Action and Inquiry.”](#) comprises the literature reviews and outlines the outstanding research questions, which served as the foundation for the [Research Agenda](#) included in this blueprint.

## The Workgroups

The Transform911 team supported the associated workgroups in order to activate a wide array of experts and stakeholders to inform content that has been curated in the current Transform911

<sup>26</sup> These entities are often referred to as Public Safety Answering Points (PSAPs). However, a diverse array of other entities, including 911.gov, the National Institutes of Health, APCO International, the IJIS Institute, and many local emergency centers also use the term ECC. At the request of Transform911 co-chairs and members, this blueprint uses the term Emergency Communications Centers (ECCs) throughout.

<sup>27</sup> [transform911.org/resourcehub](https://transform911.org/resourcehub); the Transform911 website and resource hub went live in April 2021 and September 2021, respectively.

Blueprint. This blueprint represents the culmination of the workgroups' efforts and recommendations, as well as the input of the many reactors who shared their feedback and expertise.

In summer 2021, Transform911 recruited co-chairs for each workgroup. Co-chairs were selected to reflect the geographic and field diversity and professional stature necessary to ensure strong and actionable recommendations. Together, we designed and executed a series of public convenings, described below, to inform, engage, inspire, and mobilize diverse communities toward this goal. Our efforts were divided into six workgroups, headed by dedicated co-chairs. For our complete membership roster, including brief individual biographies, see Appendix B.

Workgroup co-chairs were empowered to select workgroup members through a variety of invitation and application processes. Every workgroup engaged in specific outreach to representatives of key associations and people who both expressed agreement and dissenting views in the inaugural convening (described below). Transform911 staff and co-chairs were in agreement that diverse and dissenting perspectives were essential to achieving the best outcome: an inclusive process informed by experts—including both practitioners and community members, who represent the users and base for the 911 system. These outreach and engagement efforts resulted in the involvement of 16 workgroup co-chairs and over 100 workgroup members. That these professionals found time for deep and ongoing engagement—amidst an ongoing pandemic, extensive national stress and dis-ease, and more— speaks to the salience of this issue, their commitment to the task, and their confidence that Transform911 is a vehicle for change.

911 is a system that impacts—and should be equally accessible to—everyone. The Transform911 workgroups therefore sought to engage and reflect a wide variety of personal and professional perspectives. Workgroup members are diverse in their geographies, fields, generations, race, gender, and perspective. They included 911 professionals and other first responders; community service providers, advocates, and activists; academics and other researchers; policymakers; and public health providers and experts. Moreover, the workgroups' deliberations were informed by research evidence and best and emerging practices.

In partnership with the Transform911 co-chairs, the workgroups were formed in October 2021 and met through May 2022. Their work consisted of biweekly workgroup sessions, drafting and publishing comprehensive literature reviews to provide background and context to inform the recommendations, and the outlining and drafting of the initial recommendations, which were presented for public input at Transform911's second convening (see below; the draft recommendations are contained in Appendix D).

### **Convenings and Other Feedback Sessions**

To ensure even broader reach and transparent accessibility of the initiative, as well as to build momentum and anticipation in advance of the blueprint's launch, three convenings, the Transform911 website, and a host of other interactive activities commenced.

Launched in April 2021, the Transform911 website ([transform911.org](https://transform911.org)) is a public resource that articulates our vision for an emergency response system that promotes public health, justice, and safety. It also contains an information/resource hub ([transform911.org/resource-hub](https://transform911.org/resource-hub)) containing the [Transforming 911 Report](#), a [research corner](#), a [crash course on 911](#), and an interactive [map](#) of 911 practices and initiatives across the country. These resources were developed to complement

workgroup activities and convenings, and to serve as a comprehensive and ongoing resource to the field.

The first convening, held on September 17, 2021, served as the project's public launch to engage a broad audience, build excitement and communication, and lay Transform911's foundation. More than 300 people from across the country came together to share innovations, ideas, concerns, and questions. One of the principal goals of this inaugural convening was to invite and recruit forward-thinking, collaborative leaders in 911 and related fields committed to positive transformation to join the workgroups. Recordings from the first convening are available on the Transform911 [website](#).

The second convening was held over three days, March 2–4, 2022, and served as a venue for the workgroup co-chairs to present the workgroups' draft recommendations for public input. The convening was purposefully designed to include an opportunity for meaningful public engagement, comment, and input. Recordings and input from the second convening are available on the Transform911 [website](#). The recommendations and feedback received during and after the convening are summarized in Appendices D and E, respectively.

To gather additional feedback, immediately after the recommendations were presented publicly in March, they were posted to the Transform911 website (this version of the workgroup recommendations can be found in Appendix D), along with an [online feedback form](#). Feedback was accepted through May 1, 2022. During that time period, Transform911 staff, co-chairs, and members also solicited feedback from identified reactors and stakeholders. The feedback received has all been carefully reviewed and considered in the development of this blueprint. Appendix E includes the feedback received, as well as analyses and syntheses presenting emergent themes across and between the recommendations that Transform911 research staff conducted to support the workgroup co-chairs' and members' review process.

### **Transform911 Partnerships**

Several key organizational partners were involved in developing and facilitating the workgroups, as well as creating the processes and content that has resulted in the recommendations outlined in this blueprint. Individual workgroup contributors and short biographies are included in Appendix B. Organizationally and individually, the funders of this effort also served as key partners to transforming 911.

The [Full Frame Initiative](#) (FFI) joined Transform911 as a key partner in summer 2021 and has provided instrumental support and thought partnership throughout all of the efforts described in this blueprint, as well as its creation. FFI works toward one goal: a country where everyone has a fair shot at wellbeing. FFI brings national expertise in orienting systemic change around wellbeing; systems change processes; and in designing and driving strategies that lead boundary-spanning alliances to achieve national impact. Working in partnership, the Health Lab and FFI co-created the content and tools employed through the Transform911 Blueprint-generating process. FFI helped staff and supported each of the workgroups, generated content for the workgroup sessions and convenings, and significantly contributed to the design, facilitation, analysis, and other related activities that resulted in this blueprint and recommendations contained herein.

[Code for America](#) (CfA) became a key contributor to this work, with Health Lab and CfA together designing and launching the 2021 National Day of Civic Hacking, focused on transforming 911. This event, which took place on September 18, 2021, involved nearly 1,000 participants across the country



gathering, coding, and analyzing 911-related data, as well as the sustained engagement of about 100 people beyond this day of action.<sup>28</sup> Moreover, three CfA senior staff members have served as Transform911 workgroup co-chairs.

Recognizing that the Transform911 Blueprint and related activities are a part of a larger and longer history around 911 and that we would benefit from that additional knowledge and context, we partnered with the [Black Belt African American Genealogical and Historical Society](#) (BBAAGHS). BBAAGHS is a nonprofit community-based organization that is dedicated to the study and exchange of information and ideas among people interested in African American genealogy, family history, and historic preservation in the 12 counties of Alabama's Black Belt Region—Bullock, Choctaw, Dallas, Greene, Hale, Lowndes, Macon, Marengo, Perry, Pickens, Sumter, and Wilcox. On behalf of Transform911, BBAAGHS conducted primary research to create a people's history of 911, which sought to assess the historical role of early 911 systems in Haleyville, Alabama—where the first 911 call was made—and the other areas of the state. BBAAGHS developed and applied a methodology and approach to conduct an oral history of 911, highlighting historical attributes—and their related successes, opportunities, and challenges—to the origins of 911 and experience across Alabama's Black Belt. BBAAGHS's research informed this blueprint and the related processes, and the methodology they developed offers opportunities for other jurisdictions and researchers to add to this evidence base.

[RTI International](#) and New York University School of Law's [Policing Project](#) participated in early design efforts with the Transform911 team and continued to engage in this work through several key staff members of each organization serving on Transform911 workgroups, contributing ideas and content through this process. Research efforts that each organization has been engaged with—and early findings shared with Transform911—also helped establish the process and inform the recommendations.

## Launching the Blueprint

The goal of this blueprint—and the related convening—is that it will immediately be acted upon by the developers themselves and will not be a report that sits on the shelf. This effort is truly “co-owned” collectively by the Transform911 workgroup co-chairs and members who developed the content and provided the ambition and expertise necessary to establish the recommendations presented here. The workgroup co-chairs and members have and, we expect, will continue to serve as vital ambassadors and leaders for the work and will help push for the implementation of the Transform911 Blueprint's recommendations nationwide and in their communities.

On June 29, 2022, this blueprint was released publicly during a third Transform911 convening. The one-day public event was hosted both virtually and in person, in partnership with the Orleans Parish Communications District (OPCD) Emergency Communications Center (ECC),<sup>29</sup> in New Orleans, Louisiana, and was open to the public and all Transform911 stakeholders, funders, members of the media, and federal and state representatives and staff. The event's primary goals were to unveil the blueprint, showcase relevant early examples of applied recommendations, and present plans and opportunities for implementation. This blueprint marks a milestone in the transformation process, invites others into changes that are already gathering steam via the workgroup's consideration process, and also to raise the profile of the work.

---

<sup>28</sup> Additional information about the National Day of Civic Hacking and the contributions participants made is available at [codeforamerica.org/national-day-of-civic-hacking/ndoch-2021/#:~:text=The%20theme%20for%20this%20year's,systems%20work%20around%20the%20country.](https://codeforamerica.org/national-day-of-civic-hacking/ndoch-2021/#:~:text=The%20theme%20for%20this%20year's,systems%20work%20around%20the%20country.)

<sup>29</sup> Orleans Parish Communications District ECC is the 911 Center that serves New Orleans, Louisiana.

## Chapter Two: Blueprint for Action

The Transform911 Blueprint for action born of this work is described below. First, however, it is important to ground our recommendations in several key considerations of Transform911 itself: Transform911's north star, operating definition of 911, and what we mean by the language of "community."

### Transform911 North Star

Transform911 envisions a 911 system that equitably and reliably increases access to wellbeing for those who need emergency assistance, the professionals who staff 911, and those deployed to respond. We build on the extraordinary and positive innovations in the field to address the challenges and inequities that are within our reach and control, recognizing that the change we envision cannot happen without shifts in the systems and communities that 911 serves.

## TRANSFORM<sup>911</sup> DEFINING 911

**911 is a complex system requiring expertise, communication, coordination, resources, and trust to span:**

- ✓ **diverse cultural, historical, linguistic and other realities across and within America's communities**
- ✓ **call-taking, call-handling, and dispatching procedures**
- ✓ **methods by which users initiate the request for assistance—telephone call, text, or other defined mechanisms**
- ✓ **response— virtual or on-scene traditional (i.e., EMS, fire, or police) and/or other sectors of the first responder ecosystem**

## Defining 911

The definition of 911 is “a telephone number used to reach emergency services, [such] as the police, the fire department, or an ambulance.”<sup>30</sup> This definition is currently employed by 911 and other emergency crisis professionals. Transform911 has employed a broader definition, one that is more in line with the general public’s perception of 911. Transform911 defines 911 as the system that, when working at its full potential, provides members of the public who are facing acute threats to their wellbeing with appropriate, equitable, relevant, immediate, and around-the-clock access to relief from distress. 911 is a complex system requiring expertise, communication, coordination, resources, and trust to span

- (a) the diverse cultural, historical, linguistic, and other realities across and within America’s communities;
- (b) the methods by which users initiate the request for assistance—be that by way of a telephone call, text, or other defined mechanisms;
- (c) the call-taking, call-handling, and dispatching procedures; and
- (d) the response—be that by virtual or on-scene traditional (i.e., EMS, fire, or police) and/or other sectors of the first-responder ecosystem.

## How We’re Understanding Community

For the purposes of this work, there are several distinct and overlapping communities. Diverse community members who access 911 and related services and the people who are impacted by them nationwide are a discrete community for which Transform911 has sought intentionally to include through workgroup membership, recommendation development and reaction, and as the beneficiaries (i.e., they have something to gain or lose by way) of the recommendations. Other communities that have a vested interest in Transform911 specifically and 911 more broadly are 911 professionals, traditional and alternative first responders, healthcare professionals, and policymakers. Throughout this work and this blueprint, the call for inclusion, partnership, and power is particularly salient for those communities that have been historically marginalized, the most impacted, and closest to the inequities and harms of our systems.

## Transforming 911

The reality of 911 in many communities is far from achieving these definitions. We find ourselves with a 911 system that is

- under-resourced;
- under-staffed;
- not understood by the general public;
- not well positioned to nimbly adapt to future needs; and as a result
- often ill equipped to adequately triage and deploy resources to ensure the right response is dispatched at the right time.

911 is also situated in a larger context of systems that have historically responded to people very differently based upon personal characteristics and geographies.<sup>31</sup> Differences in responses and outcomes have contributed to, and in some instances resulted in, some people and communities fearing

---

<sup>30</sup> According to Dictionary.com, based on the Random House Unabridged Dictionary: <https://www.dictionary.com/browse/911>.

<sup>31</sup> For a review of the research that exists on this topic, what can be extrapolated, and where evidence is lacking, see *Transform911: Assessing the Landscape and Identifying New Areas of Action and Inquiry*, <https://www.transform911.org/resource-hub/transforming-911-report/>, in particular chapter four, “Emergency Communications Center Operations.”

911 and opting not to use this system no matter how dire the crisis may be.<sup>32</sup> Transform911 and this blueprint are working to identify these challenges and offer practical solutions toward addressing them. These efforts work to solve the challenges facing the 911 system by simultaneously recognizing and building on the passion, knowledge, and infrastructure already in place, while also taking a clear-eyed look at where the current system is insufficient or even counterproductive to addressing community needs. We weave this together in the recommendations that follow.

The current 911 system holds many tensions. It is a highly personal, nationwide resource. It is ubiquitously known and simultaneously completely misunderstood as one unified national system and universally as part of the policing system. Recognizing and building upon these tensions is at the core of transforming 911.<sup>33</sup> In doing so, this blueprint operationalizes seven essential recommendations to transform 911 for public health, safety, and justice.

Taken together, these recommendations outline seven essential tenets to support both the 911 system and the communities it serves today and in building for the future. In transforming 911, it is essential that 911 services operate independently from and equal to other public safety agencies and that any person be able to access immediate help through 911 at any time and in any place. To achieve this essential state, we must support, elevate, and invest in the workforce; provide more responsive services that are transparently explained to callers in real time; advocate for the implementation of national minimum standards, practices, and procedures; use data more effectively, and invest in robust resources that respond to community needs.

The time to transform 911 is now. Our nation's equitable and effective access to wellbeing hinges upon prioritizing the seven recommendations outlined in this blueprint. The recommendations are not stand-alone provisions; they are designed to be implemented in unison and with fidelity. They require an investment of critical resources, most importantly the time and attention of community members, practitioners, stakeholders, and policymakers, who are all needed to transform this critical system. The recommendations in this blueprint respond both to the current as well as the future state of 911.

## **The Future is Now**

The Transform911 Blueprint attempts to be clear-eyed about the current limitations of our nation's 911 system—which in many ways is antiquated and inadequately resourced—while advocating for the recommendations that are necessary to support the rapidly changing conditions that drive needed changes and required investments. We must also acknowledge where and how our nation's 911 system can be improved to enhance access to wellbeing today and to set the system up for success in the future.

For example, as demographics and populations change over the next few decades, the 911 system must strive to respond to that new cultural landscape. For example, the US population is aging,<sup>34</sup> which will likely result in increases in calls for both 911 and 988 services as elders are more likely to fall and experience health crises related to chronic illnesses such as heart disease and dementia that can lead to

---

<sup>32</sup> Ibid.

<sup>33</sup> Neusteter et al., "Understanding Police Enforcement: A Multicity 911 Analysis," Vera Institute of Justice, September 2020, <https://www.vera.org/publications/understanding-police-enforcement-911-analysis>.

<sup>34</sup> Jonathan Vespa, "The U.S. Joins Other Countries With Large Aging Populations," US Census Bureau, October 8, 2019, <https://www.census.gov/library/stories/2018/03/graying-america.html>.



crises. Furthermore, the US population is becoming more ethnically and racially diverse,<sup>35</sup> which may increase the need for non-police responses such as peer- and community-based crisis response and mental health treatment. The reason for this is that some immigrant populations, Black people, and other people of color may be fearful of police and law enforcement institutions and thus less likely to call 911 for mental health and other crises.<sup>36,37</sup> The [911 workforce](#) is [predominately white](#); as the population becomes more diverse, the 911 system must respond by seeking to become more inclusive and diverse.

Climate change will also impact the nature and type of calls 911 receives. For example, pandemics will be more common<sup>38</sup> as the planet continues to lose biodiversity, the climate will become hotter,<sup>39</sup> and we will experience more flooding as sea levels along the coastline rise.<sup>40</sup> With these projections in mind, the need for fire and rescue services will increase alongside the need for immediate medical assistance.

And finally, the future of work itself will change substantially as technology continues to drive innovation. In many locations, as much as [80% of calls to 911 come from cell phones](#), representing a major technological change. In the near future, text, the internet of things, wearables, and other technology are expected to expand the types of data flowing to and through the 911 system.<sup>41</sup> 911 systems in many communities are not well equipped to handle these different inputs effectively. Furthermore, augmented intelligence, automation, and more will eliminate whole classes of jobs—potentially including elements of the 911 system—and create the need for whole new workforces.<sup>42</sup> According to the Bureau of Labor Statistics, the 911 workforce alone is expected to grow by 8 percent from 2020 to 2030, with an average of almost 10,000 openings projected each year, over the course of the next decade, not factoring in the areas of the 911 system’s larger workforce ecosystem, such as 988 and other hotlines, as well as growth in the traditional and alternative first responders fields. This larger first responder workforce ecosystem is explored in greater detail below, in chapter five, of the blueprint.

The impacts of technology changes go beyond workforce challenges. For example, NG911<sup>43</sup> will change the nature and type of information that can be shared with ECCs, to include video and text, as well as

<sup>35</sup>Jeffrey S. Passel and D’Vera Cohn, “U.S. Population Projections: 2005-2050,” Pew Research Center, February 11, 2008, <https://www.pewresearch.org/hispanic/2008/02/11/us-population-projections-2005-2050/#:~:text=Racial%20and%20Ethnic%20Groups&text=The%20black%20population%2C%2038%20million,2050%2C%20nearly%20tripling%20in%20size>.

<sup>36</sup> Katherine L. O’Connell et al., “Association between race and socioeconomic factors and suicide-related 911 call rate,” *Social Science & Medicine* (2022): 115106, <https://www.sciencedirect.com/science/article/abs/pii/S0277953622004129>.

<sup>37</sup> Eric R. Kessell et al., “Effect of racial and ethnic composition of neighborhoods in San Francisco on rates of mental health-related 911 calls,” *Psychiatric Services* 60, no. 10 (2009): 1376-1378, <https://ps.psychiatryonline.org/doi/full/10.1176/ps.2009.60.10.1376>.

<sup>38</sup> UNESCO, “Pandemics to increase in frequency and severity unless biodiversity loss is addressed,” <https://en.unesco.org/news/pandemics-increase-frequency-and-severity-unless-biodiversity-loss-addressed>.

<sup>39</sup> Umair Irfan, Eliza Barclay, and Kavya Sukumar, “Weather 2050,” VOX, July 19, 2019, <https://www.vox.com/a/weather-climate-change-us-cities-global-warming>.

<sup>40</sup> NOAA, “U.S. coastline to see up to a foot of sea level rise by 2050,” February 15, 2022, <https://www.noaa.gov/news-release/us-coastline-to-see-up-to-foot-of-sea-level-rise-by-2050>.

<sup>41</sup> Winbourne Consulting, *White Paper: Internet of Things (IoT) and Next Generation 911*, June 2019, <http://www.w-llc.com/wp-content/uploads/2019/06/Winbourne-Consulting-IoT-and-NG911-White-Paper-Jun-2019.pdf>.

<sup>42</sup> Derek O’Halloran, “How technology will change the way we work,” World Economic Forum, August 13, 2015, <https://www.weforum.org/agenda/2015/08/how-technology-will-change-the-way-we-work/>.

<sup>43</sup> For resources on the NG911 movement, see <https://www.ng911institute.org/resources> and [https://www.nena.org/page/NG911\\_Project](https://www.nena.org/page/NG911_Project).

offering cloud-based data systems that enable information sharing across ECCs and other agencies. These innovations increase data vulnerability<sup>44</sup> and affect caller privacy.<sup>45</sup>

## **Seven-Point Plan to Transform 911**

The 911 of the future—the 911 that America needs and deserves—is within reach but will only happen through the concerted efforts of the general public, policymakers, and the deeply committed 911 professionals who are the backbone of the system.

In charting a course toward this vision of 911, we have built on the evidence base, promising practices, and the wisdom of a growing group of deeply invested stakeholders. We have taken economics and history into account, as well as where there is tremendous strength and momentum to build on. We have also worked hard to prune away a host of important, but perhaps less impactful, tactics and recommendations.

We are calling for seven mutually reinforcing strategies, or “recommendations,” essential for reaching the vision of 911 we put forward:

- 1. (Re)Introducing 911**
- 2. Putting the People in 911**
- 3. Advancing the Workforce**
- 4. Making 911 Independent and Equal**
- 5. Ensuring the Right Response at the Right Time**
- 6. Strengthening Data and Tech Standards**
- 7. Securing National-Level Support (for 911)**

---

<sup>44</sup> Jon Schuppe, “Hackers Have Taken Down Dozens of 911 Centers. Why Is It So Hard to Stop Them?” NBC News, April 3, 2018, <https://www.nbcnews.com/news/us-news/hackers-have-taken-down-dozens-911-centers-why-it-so-n862206>.

<sup>45</sup> Rob Grace and Jess Kropczynski, “Communicating Next-Generation 911 with Local 911 Professionals: Preliminary Recommendations,” in *2020 IEEE International Professional Communication Conference* (2020): 110-114, <https://par.nsf.gov/servlets/purl/10281186>.

## TRANSFORM 911 SEVEN-POINT PLAN



Below, we introduce all seven recommendations and the rationale for each. Following this overview, we provide a chapter for each recommendation with more discussion and detailed, deeply considered action steps necessary to advance that recommendation, reflecting the concluding work of each workgroup and national feedback and input.

For some readers, one or more of these recommendations and action steps may feel obvious, others less so. You may even initially disagree with some of them. This blueprint serves as an invitation for leaders and other interested parties who recognize the importance of 911 in their communities to join us in aiming for Transform911's north star through considering and working to implement the following recommendations.

### 1. (Re)Introducing 911

*Everyone knows the number, almost no one knows how it works.*

**What are we calling for?** We are calling for a multipart national outreach, education, and visibility campaign to reintroduce 911 as a system and as a profession that is an essential gateway to the care infrastructure of America.

**Why is this essential?** While 911 is ubiquitous, what 911 does and how it operates is not well known. As is so often the case, perception often becomes reality, such as 911 being perceived as an enforcement

or policing response. Too many people think 911 is just a switchboard not meriting particular skills or expertise by call handlers.<sup>46,47</sup> It's everywhere, and when it doesn't work, the general public assumes that's the fault of the people who work in the system, rather than a symptom of systemic failure or disinvestment. System failures include inadequately resourcing response options to ensure the right responder can be deployed at the right time, to technological system failures that can result in deploying responders to the wrong address, or to not having a reliable address to deploy a response at all. The result of people not knowing how the 911 system works, along with knowledge in terms of its functioning and vulnerabilities, is that the 911 system is misunderstood by a broad swath of America.<sup>48,49</sup> This recommendation reflects the need to clarify what 911 is and isn't, and to build the constituency, visibility, political will, and enthusiasm needed to realize and sustain a highly effective and imperative system that contributes to public health and community wellbeing.

## 2. Putting the People in 911

*Community partnership is essential to a 911 system that works for everyone.*

**What are we calling for?** We are calling for structures and practices that create deeper and more transparent partnerships between Emergency Communications Centers and the communities<sup>50</sup> they serve, with particular attention paid to demographic or identity communities who may have differential experiences and understandings of emergency response systems (including but not exclusively 911). We are calling for intentional, integrated community voice and leadership at critical points in the system to facilitate shared, though inherently not equally weighted, responsibility in system outcomes.

**Why is this essential?** 911 is a vital resource for the general public, but its operations and outcomes are often experienced as opaque by that same public, who may not know exactly how to get the data and information they seek. This results in a 911 system in which accountability and transparency currently aren't consistently available to the public. Ensuring that 911 is equitably accessible, effective, and responsive requires partnering with the people and communities who are served by the 911 system to help each caller achieve wellbeing and relief from distress for themselves and for those around them.

Focusing on community is a full recommendation because designing and implementing by, for, and with community is deeply countercultural in many systems in America, including 911. Distributing power and accountability with the broader community, particularly those communities currently less likely or willing to call 911, will not happen without purposeful, sustained effort. Even with the best of intentions, such efforts can flounder and create whole new harms when sprinkled on to existing practices. Community members are true assets; they are resources and serve as supports to each other and can be

<sup>46</sup> Neusteter et al., "Understanding Police Enforcement: A Multicity 911 Analysis," Vera Institute of Justice, September 2020, <https://www.vera.org/publications/understanding-police-enforcement-911-analysis>.

<sup>47</sup> Transform911 workgroup conversations and data shared from practitioners, i.e., practitioner-based evidence gleaned through the Transform911 workgroup process.

<sup>48</sup> Ibid.

<sup>49</sup> *Transform911: Assessing the Landscape and Identifying New Areas of Action and Inquiry*, <https://www.transform911.org/resource-hub/transforming-911-report/>.

<sup>50</sup> For the purposes of this work, there are several distinct and overlapping communities. Diverse community members who access 911 and related services and the people who are impacted by them nationwide are a discrete community for which Transform911 has sought to intentionally include through workgroup membership, recommendation development and reaction, and as the beneficiaries (i.e., they have something to gain or lose by way) of the recommendations. Other communities that have a vested interest in Transform911 specifically and 911 more broadly are 911 professionals, traditional and alternative first responders, healthcare professionals, and policymakers. Throughout this work and this blueprint, the call for inclusion, partnership, and power is particularly salient for those communities that have been historically marginalized, the most impacted, and closest to the inequities and harms of our systems.

to public safety agents through trusting alliances. Building alliances with the public involves educating the community about how the 911 system works and engaging the community, particularly marginalized community members where disparities are prevalent. Seeking out and listening to the expertise of people about their lived experience and engaging that expertise and insight to continuously examine relationships, practices, policies, and structures allows for the development of a relevant, accountable, effective, and curative emergency response system.

Those who have been adversely impacted by a system have a unique and critical perspective on what would heal or help. Likewise, 911 professionals who have expertise in response protocols and processes are well positioned to make decisions about these elements. However, both group's experiences have historically been left out, resulting in ECCs that are not reflective of and appropriately responsive to the people who serve in and are served by ECCs. ECCs must therefore adopt mechanisms that allow for community voice and accountability to the people served, as well as to 911 professionals.

### 3. Advancing the Workforce

*There's no 911 without a recognized, supported, professional workforce.*

**What are we calling for?** We are calling for 911 professionals—who are critical to the functioning of the entire 911 ecosystem, from call-taking to field responses—to have access to high-quality, consistent minimum training, wellbeing support, compensation, and career paths, commensurate with the reality that they are professionals and the first, first responders. This requires reclassifying 911 professionals from “administrative support” to “protective service” and addressing local and regional barriers to recruitment and retention, including factors that impact attracting and retaining diverse staff reflective of the communities they serve. This also requires building response networks to understand and fill out the ecosystem of needed responses, including hiring people with lived crisis experience and preparing them adequately for the work.

**Why is this essential?** The wellbeing of the public requires that their calls to 911 be handled by trained professionals who receive support in equitably handling the tremendous traumas of the profession and whose compensation and benefits are reflective of the requirements of the position. 911 professionals make consequential decisions under highly stressful conditions; their decisions have ramifications across the entire response ecosystem. Compensation and clear opportunities for advancement in the field are essential to minimize turnover and support strong agency culture. Other first responders in the ecosystem are under-resourced and require similar considerations: needed minimum training and standards, parity in pay and benefits, and support for experienced trauma. Currently, however, few of these elements are in place, which significantly compromises the entire first response system.

Moreover, Emergency Communications Centers nationwide are facing staffing shortages, with many below 50% of optimal staffing levels.<sup>51</sup> Retaining staff through ongoing support and even retraining will save money over time as turnover is reduced and the need to conduct costly recruiting and training of new staff is minimized. First responders—including 911 professionals—deserve respect, safety, support, and a living wage. Building up a 911 workforce that is dedicated, compassionate, prepared, and supported by internal leadership and the public alike will set us on a path to wellbeing for public safety workers and the communities they serve.

---

<sup>51</sup> *Transform911: Assessing the Landscape and Identifying New Areas of Action and Inquiry*, <https://www.transform911.org/resource-hub/transforming-911-report/>.



## 4. Making 911 Independent and Equal

*ECCs that are independent and equal to other local first response systems help improve equitable outcomes.*

**What are we calling for?** We are calling for local 911 Emergency Communications Centers to be independent and equal public safety departments equipped to tap a diverse range of responses to best match the response to each emergency. This requires removing the default to police or another system common in many communities when ECCs are housed within law enforcement or another emergency response agency.

**Why is this essential?** The mission and function of ECCs across the nation have transformed from simple information transfer stations to critical points in the public safety incident life cycle where resource deployment and tactical decisions are made. The leaders of these agencies need autonomy to address issues that affect the greater public safety mission of a jurisdiction that has proven practically and politically difficult when ECCs are in a subordinate position (usually within or to police and/or fire).<sup>52</sup> An experienced emergency communications professional should be in an equal position to fully inform elected officials, governing bodies, and the public without fear of recourse or concerns about being minimized or questioned by other public safety agencies.

## 5. Ensuring the Right Response at the Right Time

*A diverse ecosystem of responses reduces reliance on the police by default.*

**What are we calling for?** We are calling for significant investment in a diverse ecosystem of response options so that callers can be met with the right response at the right time. These response options can and should include the availability of experts in triaging crises in ECCs as well as connections that enable 911 professionals to transfer calls to hotlines or virtual and on-scene responders skilled in managing a host of community needs, including homelessness, mental health crises, substance use crisis, and domestic violence.

**Why is this essential?** People call 911 for a wide swath of reasons, ranging from noise complaints to mental health crises to requests for information and much more, and though only a small fraction require a law enforcement response, nationwide 911 professionals do not have a diverse ecosystem of responses to deploy. For this reason, it is critical that the 911 system move away from police as the default response by tapping into a more robust, relevant ecosystem including, but not defaulting to, police. This transformation is essential to ensure that 911 can provide access to a full range of appropriate immediate responses around the clock to support callers' wellbeing and relief from distress when their social networks and the people and resources around them are not sufficient to address the crisis appropriately.

## 6. Strengthening Data and Tech Standards

*Reliable and ethical data and tech improves responses.*

---

<sup>52</sup> See *Transform911: Assessing the Landscape and Identifying New Areas of Action and Inquiry*, <https://www.transform911.org/resource-hub/transforming-911-report/> for the limited research and discussion related to this recommendation. This is an area in which empirical evaluation is wanting, however. Through the Transform911 workgroup deliberations and data shared from involved practitioners, i.e., the practitioner-based evidence gleaned through the Transform911 workgroup processes, this a reality that has been well established and understood for and among 911 practitioners and leaders nationwide.

**What are we calling for?** We are calling for uniform 911 minimum data standards and improved data collection practices, as well as the development and maintenance of transparent, consistent policies on the ethical use of technology and data in emergency response. This covers data privacy and algorithmic transparency for software systems built around emergency response data. Furthermore, we are calling for the adoption of clear and specific guidelines for standardizing, sharing, and making available emergency response data across the nation.

**Why is this essential?** Variances in data collection and transparency processes across jurisdictions, and the lack of a national 911 data collection effort, have hampered our ability to leverage data in the current state of things. Innovation and rapid, nationwide systemic improvements are made possible when data on emergency calls, responses, and outcomes are made available.

While we hold data transparency as a core value, we also recognize that emergency call data does include a host of highly sensitive and personal information. Callers to 911 must have the peace of mind that their wellbeing will not be undermined through the sharing of information that they assumed was private. Ethical and transparent communication and methods around getting caller consent for response and sharing information is essential.

Modern emergency management relies on the deployment of modern technology, not only to manage the response to emergencies, but to ensure that the public is able to access emergency services through technological means that work best for them. Ethical deployment of tech includes increasing equity in 911 coverage, as much as possible, for example, by using things like tele-response in rural and tribal areas.

The future will bring further developments in augmented intelligence, but as more and more information produced by automated systems is used to guide decision-making, it is essential that the algorithms employed are transparently developed and examined for inequitable outcomes. In short: if automated systems are guided by the inequitable decision-making processes of the past, inequity will be further baked into our systems.

## **7. Securing National-Level Support (for 911)**

*Effective, equitable emergency response locally requires unequivocal support federally.*

**What are we calling for?** We are calling for federal, executive branch leadership to embrace and advance the transformative changes outlined in these recommendations. Specifically, we are calling for the president to create a time-limited 911 center and directorship by December 31, 2022, along with a federal interagency taskforce—to also include the relevant federal agencies, as well as local 911 and other related field leaders—and a National Academy of Sciences (NAS) panel. The emphasis on time limitation is made because a permanent federal home for this center should be carefully examined and ultimately recommended by the NAS panel to establish where it can best be located to serve the needs of callers and the workforce; to coordinate complex processes among the many federal, state, and local partners; bolster federal support; and weather political leadership changes. There are many considerations for 911's long-term success that will need to be carefully considered before this center should be established.

While we strongly believe that federal leadership and guidance are critical for the transformation of 911, we emphasize that we are *not* calling for the federalization of the 911 emergency response system. Provision of services and authority to deploy them so should remain at the local, regional, or state level.

We are calling for federal guidance and resources to support local leadership (see chapter nine on national support), to promote more direct connections to the community (see chapter four on the people), and to make a significant financial investment in this long-overlooked aspect of the emergency response system.

## **Why is this essential?**

Our nation's 911 system currently functions through a patchwork of thousands of locally operated ECCs, with oversight and support split across many different federal, state, and local agencies. Local control and relevance are essential (see chapter six on independent and equal 911). But without national minimum standards to align operational procedures and ensure communication and coordination among jurisdictions, the possibility of transformation on a national scale is reduced. For example, depending on the jurisdiction, 911 emergency calls may be handled by staff who are highly trained in a variety of emergency responses or by staff who have not even been trained to help a caller administer cardiopulmonary resuscitation or who lacks access to certified language translation services. This inequity in system responses almost universally disadvantages those in small, poor, or otherwise marginalized communities, and it undermines public safety and public health.

The federal government is uniquely suited to convene stakeholders to build constituency, tap expertise, and set minimum standards for training, data, and technology. Without federal involvement, standards are not only optional; they are largely unfunded. Federal incentives, coordination, adherence monitoring, and resourcing has the power to galvanize the adoption of innovative practices and technology across geographical and operational lines—from our most rural communities to the densest urban centers.



## Chapter Three: (Re)Introducing 911

*Everyone knows the number, almost no one knows how it works.*

**What are we calling for?** We are calling for a multipart national outreach, education, and visibility campaign to reintroduce 911 as a system and as a profession that is an essential gateway to the care infrastructure of America.

**Why is this essential?** While 911 is ubiquitous, what 911 does and how it operates is not well known. As is so often the case, perception often becomes reality, such as 911 being perceived as an enforcement or policing response. Too many people think 911 is just a switchboard not meriting particular skills or expertise by call handlers.<sup>53,54</sup> It's everywhere, and when it doesn't work, the general public assumes that's the fault of the people who work in the system, rather than a symptom of systemic failure or disinvestment. System failures include inadequately resourcing response options to ensure the right responder can be deployed at the right time, to technological system failures that can result in deploying responders to the wrong address, or to not having a reliable address to deploy a response at all. The result of people not knowing how the 911 system works, along with knowledge in terms of its functioning and vulnerabilities, is that the 911 system is misunderstood by a broad swath of America.<sup>55,56</sup> This recommendation reflects the need to clarify what 911 is and isn't, and to build the constituency, visibility, political will, and enthusiasm needed to realize and sustain a highly effective and imperative system that contributes to public health and community wellbeing.

### **Actions:**

1. Build local awareness. For example:
  - Partner with major and minor league sports teams, as well as colleges, universities, and high schools, that spotlight 911 professionals as “local heroes” at various sporting events.
    - An example here can be found in the way that police and fire departments partner with major league sports teams. Most sports fans will be familiar with the ubiquitous presence of local police and fire color guards during the national anthem at major league sporting events. Many teams host [first responder nights](#) and [honor exemplary](#) first responders during games. Some teams have even named [awards](#) after them. ECCs' and 911 professionals should find ways to partner in similar ways. This will help shine a light on 911 professionals, as “heroes behind the headset,” by advancing a deeper understanding of and appreciation for this critical workforce and educating the public about the nature of the profession and building a talent pipeline.
  - Work with school superintendents and principals to ensure that 911 professionals are included in career days and “know the helpers” days starting in elementary school.

<sup>53</sup> Neusteter et al., “Understanding Police Enforcement: A Multicity 911 Analysis,” Vera Institute of Justice, September 2020, <https://www.vera.org/publications/understanding-police-enforcement-911-analysis>.

<sup>54</sup> Transform911 workgroup conversations and data shared from practitioners, i.e., practitioner-based evidence gleaned through the Transform911 workgroup process.

<sup>55</sup> Ibid.

<sup>56</sup> Transform911: Assessing the Landscape and Identifying New Areas of Action and Inquiry, <https://www.transform911.org/resource-hub/transforming-911-report/>.

2. Support accurate storytelling:
  - Develop and disseminate press guidelines to help reporters ensure their reporting on 911 is accurate and complete and doesn't reinforce existing misconceptions (e.g., that police and 911 are synonymous).
  - Develop a simple module/video for elementary schools introducing children to 911.
  - Recognize that 911 professionals, public safety officers, and the public have differing expectations of the 911 system and chart a path to reconciling them.
3. With major support from philanthropy, create and launch public awareness and targeted messaging campaigns that reintroduce 911 and address the following:
  - What 911 is: 911 is a separate, complex system, as essential to public health and safety as police, fire, and emergency medical services, but it is separate from these other services. 911 is the gateway to care and wellbeing for people in extreme distress.
  - The people of 911: The professionals, "heroes wearing the headsets," are first responders. A national visibility campaign, designed to help the public understand what 911 professionals do will provide staff with the recognition they deserve while also making 911 a more desirable career option, opening opportunities to expand recruitment and increase staffing to optimal levels. Positioning 911 as a viable, desirable career path for those who are brave, committed, dedicated, and want to serve their communities is vital for recruitment and retention.
  - 911 as a national resource: 911 is essential to our country's future, but it is not a given that it will be there for us all. Create momentum for minimum national standards and federal funding.
  - 911 is uniting: Access to 911 should be something that connects us all, even in our very divided country. 911 is committed to representing all of the communities served.
  - For an example, one need look no further than the burgeoning messaging campaign around 988. While much work remains in order to get the word out, the Substance Abuse and Mental Health Services Administration has developed a [key messaging campaign](#) for 988, and many nonprofits have developed [coordinated messaging campaigns](#). This messaging has been picked up and broadcast by [podcasts](#) and [other outlets](#).
4. Develop and distribute messaging specific for the executive office of the president on launching a federal center for 911 (see chapter nine on national support) as needed.
  - The executive office of the president issues key messaging on many topics. See, for example, the Biden administration's announcement about a comprehensive [mental health strategy](#) in early 2022.
5. Equip the field with advocacy tools and messaging to support reclassification and new funding streams (see chapter nine on national support).
6. Develop and distribute messaging that can be used by ECCs to support recruitment and the proper use of 911, work with local community colleges, and more to create career pathways.
  - Ensure that these tools both reflect and reinforce the shift to greater diversity in the 911 professionals' community.
  - For example, for many years, police and sheriff departments have tried various messaging strategies<sup>57</sup> (such as "hiring in the spirit of service") to engage applicants and

---

<sup>57</sup> US Department of Justice Community Oriented Policing Services (COPS), "Recruitment, Hiring, and Retention," [https://cops.usdoj.gov/recruitment\\_hiring\\_and\\_retention](https://cops.usdoj.gov/recruitment_hiring_and_retention).



have created pathways<sup>58</sup> for youth (such as cadet programs) to learn about and consider policing as a career.

7. Through geomapping, op-ed placement, visibility events, and more, lift up progress and what's working. The purpose of these efforts is to demonstrate that this work is entirely possible to shift the narrative from "Can this even work in my community?" to "How can I make this work in my community?"
8. Support momentum:
  - Provide backbone support to the Transform911 workgroup co-chairs, members, and other valuable spokespeople as they translate these recommendations and make the case to constituents.
  - Involve economically and socially marginalized community members who have been affected by 911 (see chapter four on the people), to help support and inform the 911 ecosystem and to provide compensation so that they are able to fully participate.
  - Create opportunities for interested communities to find others who are on the same journey.
9. Create opportunities appropriate for a given ECC to allow the community to "see under the hood," whether that's a short video, ECC tours, or other mechanisms.
  - Community members and 911 professionals should work together to educate one another on their perspectives with a goal of increasing confidence in the use of 911, including using public education opportunities, surveys, listening sessions, and in-person observations at ECCs.
  - An example here comes from the West Midlands Police in England, which created a [short video](#) to educate the public on the UK's THRIVE (Threat, Harm, Risk, Investigation, Vulnerability, and Engagement) assessment, and a [fact sheet](#), which was developed to ensure that the department delivers the right response at the right time for any given public emergency call for service.

An effective US and broader international campaign that employs and deepens the action steps outlined in this recommendation includes efforts to promote excellence and professional development in science, technology, engineering, and math (STEM). The STEM campaign effectively combined [private](#) and [public](#) efforts at the [local](#), [state](#), [federal](#), and global efforts to coin the term STEM, launch successful strategies to "[Educate and Innovate](#)" at the [federal level](#), develop and implement effective [marketing tactics](#) to "[Engage and Inspire](#)" school-aged children, market the "[Broad Line](#)" internationally, and promote diverse approaches to bring more women, people of color, and other diverse constituents into the STEM career and talent pipelines, utilizing media, social media, school curricula, extracurriculars, and other targeted activities to broaden the diversity and success of STEM efforts worldwide.

<sup>58</sup> Donovan S. Thomas, "D.C. police look to increase ranks, expand cadet program," *The Washington Post*, November 18, 2021, <https://www.washingtonpost.com/dc-md-vi/2021/11/18/dc-police-high-school-cadet/>.



## Chapter Four: Putting the People in 911

*Community partnership is essential to a 911 system that works for everyone.*

**What are we calling for?** We are calling for structures and practices that create deeper and more transparent partnerships between Emergency Communications Centers and the communities<sup>59</sup> they serve, with particular attention paid to demographic or identity communities who may have differential experiences and understandings of emergency response systems (including but not exclusively 911). We are calling for intentional, integrated community voice and leadership at critical points in the system to facilitate shared, though inherently not equally weighted, responsibility in system outcomes.

**Why is this essential?** 911 is a vital resource for the general public, but its operations and outcomes are often experienced as opaque by that same public, who may not know exactly how to get the data and information they seek. This results in a 911 system in which accountability and transparency currently aren't consistently available to the public. Ensuring that 911 is equitably accessible, effective, and responsive requires partnering with the people and communities who are served by the 911 system to help each caller achieve wellbeing and relief from distress for themselves and for those around them.

Focusing on community is a full recommendation because designing and implementing by, for, and with community is deeply countercultural in many systems in America, including 911. Distributing power and accountability with the broader community, particularly those communities currently less likely or willing to call 911, will not happen without purposeful, sustained effort. Even with the best of intentions, such efforts can flounder and create whole new harms when sprinkled on to existing practices. Community members are true assets; they are resources and serve as supports to each other and can be to public safety agents through trusting alliances. Building alliances with the public involves educating the community about how the 911 system works and engaging the community, particularly marginalized community members where disparities are prevalent. Seeking out and listening to the expertise of people about their lived experience and engaging that expertise and insight to continuously examine relationships, practices, policies, and structures allows for the development of a relevant, accountable, effective, and curative emergency response system.

Those who have been adversely impacted by a system have a unique and critical perspective on what would heal or help. Likewise, 911 professionals who have expertise in response protocols and processes are well positioned to make decisions about these elements. However, both group's experiences have historically been left out, resulting in ECCs that are not reflective of and appropriately responsive to the people who serve in and are served by ECCs. ECCs must therefore adopt mechanisms that allow for community voice and accountability to the people served, as well as to 911 professionals.

---

<sup>59</sup> As described earlier, for the purposes of this work, there are several distinct and overlapping communities. Diverse community members who access 911 and related services and the people who are impacted by them nationwide are a discrete community for which Transform911 has sought to intentionally include through workgroup membership, recommendation development and reaction, and as the beneficiaries (i.e., they have something to gain or lose by way) of the recommendations. Other communities that have a vested interest in Transform911 specifically and 911 more broadly are 911 professionals, traditional and alternative first responders, healthcare professionals, and policymakers. Throughout this work and this blueprint, the call for inclusion, partnership, and power is particularly salient for those communities that have been historically marginalized, the most impacted, and closest to the inequities and harms of our systems.

## Actions:

1. Create a Callers' Bill of Rights, potentially modeled on the Patients' Bill of Rights, but with greater attention to equity and prioritizing the experience of people and communities whose relationship with 911 has historically been least productive.
  - Creating and implementing a Callers' Bill of Rights will help dispel the myth that the community is not worthy or capable of making decisions about their wellbeing by building transparent system accountabilities into the bill of rights that outlines and provides guidance for what community can and should expect when accessing 911, including how callers are treated, what is done with the data they share and who has access to it, and whom they can talk to about their experience to share gratitude/praise for what works well and/or help improve future response for what does not.
  - If ECCs are not able to meet these minimum standards, they should consider consolidating and/or sharing resources with another ECC to bring them into compliance.
  - One such model to learn from and build on is the burgeoning effort facilitated by Trans Lifeline that is being developed for responses to nonconsensual emergency interventions specifically for trans people who have called or texted a crisis hotline call and are presumed to be at "imminent risk" of suicide. Trans Lifeline has developed a [Fact Sheet](#), [Crisis Callers' Bill of Rights](#), and [community-based resources](#) (apart from police/clinical interventions) for trans people to help address the unintended effects of nonconsensual emergency interventions.
2. Engage community members in the development and delivery of 911 professionals' training to maintain relevance to community needs, help document and create paths to existing community resources, and align priorities as well as resources for current and emerging needs.
  - One example of involving the community in 911-related training is that provided by thousands of policing agencies and their partners for Crisis Intervention Teams (CIT).<sup>60</sup> This training<sup>61</sup> is often provided by National Alliance on Mental Illness (NAMI) affiliates, those with lived experience with mental illness and police encounters, and community-based behavioral health resources. These local community members share their stories to reduce stigma and provide guidance for how police officers can make encounters safer and more dignified for all involved parties.
  - In Raleigh, North Carolina, stakeholder sessions were held with 911 professionals to explore how well equipped they felt in handling and categorizing mental health calls for service. These discussions suggested that call takers felt unprepared for this aspect of the job. In response, the city is examining training platforms that will train staff on how to handle mental health calls. Call takers will be trained in and tasked with de-escalation of callers who are experiencing mental health crises.
3. Partner with community members—particularly those who have experienced unintentional harm or trauma by the existing 911 emergency response system—in the development, delivery, and accountability of 911, hotlines, and alternative responses to maintain relevance to community needs.
  - Acknowledge that the community shouldn't make decisions about call-handling, dispatching, and response processes they don't understand—education needs to go hand in hand with public engagement and involvement.

<sup>60</sup> See course and certification descriptions from CIT International, <https://www.citinternational.org/>.

<sup>61</sup> See the Police-Mental Health Collaboration Toolkit from the Bureau of Justice Assistance, <https://bja.ojp.gov/program/pmhc/training>.

- Support clarity among all stakeholders about where specialized expertise is warranted and needed and where non-specialists are capable of learning the necessary information to make informed decisions and recommendations.
  - NAMI advocates for the involvement of key stakeholders in the development of CIT.<sup>62</sup> These stakeholders offer perspective on what is likely to be effective in responding to community members in crisis who call the police and provide needed resources external to the police response.
  - Another widely disseminated model, Crisis Assistance Helping Out On The Streets (CAHOOTS), developed in Eugene, Oregon, and replicated in other places, deploys a medic along with a crisis worker to respond to people experiencing mental health crises.
  - Yet another example is the Community Response Team (CRT) program being piloted in Durham, North Carolina. Durham's CRT program sends a team including a licensed clinician, peer support specialist, and an advanced paramedic to provide rapid, trauma-informed care for 911 calls for service involving nonviolent behavioral and mental health needs and quality of life concerns. For high-risk mental health calls, Durham will deploy a peer support specialist with a CIT trained police officer to connect the person in crisis with community-based care where and when appropriate.
4. Create opportunities for ongoing community dialogue about 911: Acknowledge the community as people with valid lived experience (positive and negative, direct and indirect) impacted by the action or inaction of the emergency response system in the locality served. Use the information learned about their experience to troubleshoot systemic issues, identify gaps in service delivery, and strengthen best practice.
- Here we look internationally—to South Africa—for inspiration. South Africa has developed an innovative constitutional doctrine of “[meaningful engagement](#)” between government and communities in local matters. Developed in the aftermath of apartheid, this legal duty requires policymakers to collaborate with the community on a host of socioeconomic matters, including housing, healthcare, food security, and social assistance, in order to help ensure that public services are delivered effectively and have a positive impact on people's lives. While we are not calling for a constitutional amendment here, the concept of meaningful engagement is particularly relevant for communities—including those in the US—that have been marginalized and/or disadvantaged.
  - Utilize community sit- and listen-alongs to provide insight into ECC operations and practices. This can help enhance the public's understanding of how 911 operates locally and work to dispel some of the common misunderstandings of how 911 systems operate.
  - Facilitate listening sessions with diverse constituencies. For example, the Transform911 911 Hotline Alternatives workgroup invited representatives from several crisis service response organizations specializing in marginalized populations (diverse ethnicities and cultures, trans people and LGBTQ youth) to attend a workgroup meeting and share their reactions to emerging recommendations. The key feature of the listening session was that workgroup members did not ask questions of these attendees; they simply listened and learned.
  - Identify ways to gather data to determine how to make 911 work for the community.

---

<sup>62</sup>National Alliance on Mental Illness, “Key Partners for Your CIT Program,” [https://www.nami.org/getattachment/Advocacy/Crisis-Intervention/Crisis-Intervention-Team-\(CIT\)-Programs/Key-Stakeholders-FINAL.pdf?lang=en-US](https://www.nami.org/getattachment/Advocacy/Crisis-Intervention/Crisis-Intervention-Team-(CIT)-Programs/Key-Stakeholders-FINAL.pdf?lang=en-US).

- Utilize technology solutions to obtain 911 callers—customers of the 911 system—feedback by phone, text, and other means and/or offer return calls to discuss callers’ experiences so that users feel valued and their experiences are part of a quality improvement process, as well as evaluating the performance of the professionals staffing 911 and hotlines.
- When administering surveys, gather demographic information so that data can be disaggregated by age and zip code, for example. Several communities are already capturing this information<sup>63</sup> by linking community members to online surveys.
- 5. Ensure that membership in governing authorities and boards that control or provide oversight of ECCs is representative of the communities they serve, to include representation from historically underrepresented groups.
  - For example, the Securities and Exchange Commission [recently announced](#) a board diversity public disclosure requirement for any company listed on the NASDAQ exchange in order to encourage greater board diversity. This rule requires NASDAQ-listed companies to disclose their gender, racial, ethnic, and sexual orientation diversity annually. A similar approach could be adopted by the cabinet-level interagency 911 taskforce (see chapter nine on national support, action item 1) or undertaken by the National Academy of Sciences panel (see chapter nine on national support, action item 6) if either of these recommendations are followed.
- 6. Create, use, update, and publicly post dashboards and/or other transparency mechanisms that track how closely the 911 workforce, governing boards, and community partnership mechanisms reflect the demographics of the larger community and the community of callers, that track the first responder ecosystem’s responses and related outcomes, and that provide visibility in metrics and outcomes to understand impact, strengths, and areas for improvement and ensure that system-wide response honors the community.<sup>64</sup>
  - See, for example, Chicago’s [violence reduction dashboard](#), developed by the Chicago Police Department with technical support provided by the University of Chicago Crime Lab, which is a national model for transparency of critical, virtually real-time data.

<sup>63</sup> E.g. Jackson County 911 Call Satisfaction Survey, <https://www.surveymonkey.com/r/G58V3K2>; Fayetteville 911 Telephone Survey, <https://www.fayettevillenc.gov/city-services/police/about-us/the-communications-division/911-telephone-survey>.

<sup>64</sup> Such reporting may be difficult, if not impossible, for small ECCs. Recommendation 6, described in chapter eight, offers remedies to report on this information at the state level with the infusion of federal resources to help support development and ongoing operations.





## Chapter Five: Advancing the Workforce

*There's no 911 without a recognized, supported, professional workforce.*

**What are we calling for?** We are calling for 911 professionals—who are critical to the functioning of the entire 911 ecosystem, from call-taking to field responses—to have access to high-quality, consistent minimum training, wellbeing support, compensation, and career paths, commensurate with the reality that they are professionals and the first, first responders. This requires reclassifying 911 professionals from “administrative support” to “protective service” and addressing local and regional barriers to recruitment and retention, including factors that impact attracting and retaining diverse staff reflective of the communities they serve. This also requires building response networks to understand and fill out the ecosystem of needed responses, including hiring people with lived crisis experience and preparing them adequately for the work.

**Why is this essential?** The wellbeing of the public requires that their calls to 911 be handled by trained professionals who receive support in equitably handling the tremendous traumas of the profession and whose compensation and benefits are reflective of the requirements of the position. 911 professionals make consequential decisions under highly stressful conditions; their decisions have ramifications across the entire response ecosystem. Compensation and clear opportunities for advancement in the field are essential to minimize turnover and support strong agency culture. Other first responders in the ecosystem are under-resourced and require similar considerations: needed minimum training and standards, parity in pay and benefits, and support for experienced trauma. Currently, however, few of these elements are in place, which significantly compromises the entire first response system.

Moreover, Emergency Communications Centers nationwide are facing staffing shortages, with many below 50% of optimal staffing levels.<sup>65</sup> Retaining staff through ongoing support and even retraining will save money over time as turnover is reduced and the need to conduct costly recruiting and training of new staff is minimized. First responders—including 911 professionals—deserve respect, safety, support, and a living wage. Building up a 911 workforce that is dedicated, compassionate, prepared, and supported by internal leadership and the public alike will set us on a path to wellbeing for public safety workers and the communities they serve.

The federal government currently classifies 911 professionals as a “clerical” function. This classification is grossly inaccurate and demoralizes both the workforce specifically and the industry more broadly. Call takers and dispatchers are managing incredibly stressful situations, giving lifesaving instructions, using a vast amount of technology, and managing complex public safety units in the field. As the work tasks have become more complex, it has become difficult to attract and retain top talent. The incorrect classification makes it difficult to justify comparable and competitive salaries and benefits and to provide access to standard and minimum training and services offered to other public safety positions. Several local and state legislative bodies have taken action to classify their 911 professionals as first responders.<sup>66</sup> While these actions are effective and appreciated by those in the profession, federal

---

<sup>65</sup> *Transform911: Assessing the Landscape and Identifying New Areas of Action and Inquiry*, <https://www.transform911.org/resource-hub/transforming-911-report/>.

<sup>66</sup> [Illinois bill classifying 911 dispatchers as first responders; Alabama to recognize 911 call takers and dispatchers as first responders; Longview, WA – Under new law, Wash. dispatchers will be classified as first responders.](#)

action will provide momentum for change as many organizations' base employee compensation and classification on the federal classification.

Consistent service breeds public confidence. To support more consistent services, we must create more robust systems of support for 911 professionals (e.g., call scripts, minimum training standards, etc.) and more surety of the response from other elements in the ecosystem (including non-police on-scene and virtual responders). To inform these systems of support, we must also seek input from the 911 professionals themselves. Their feedback about needed training, standard operating procedures, recruitment and retention strategies, response options, staffing capacity, accuracy of call information, and outcomes can inform call-taking scripts and protocols and procedures for EMS, fire, law enforcement, behavioral health, and other public safety incident calls. Feedback from 911 and other first responder professionals about the nature of each call; available, appropriate, and absent first responders within the ecosystem; and the accuracy of information can support tailoring call-taking scripts and procedures and, overall, be used to provide more consistent, responsive emergency services.

The actions we outline below will make 911 dispatch and call taking more desirable careers and prevent premature burnout of staff, help to equip ECCs with the workforce they need to answer calls in a timely manner and spend adequate time on each call, and build the capacity of other elements of the first responder ecosystem.

### **Actions:**

1. Formally recognize emergency communication professionals as public safety responders, including local, state, and federal reclassification.
  - Advocate for federal reclassification by US Bureau of Labor Statistics (BLS) from "Office and Administrative Support" to "Protective Service Occupation"<sup>67</sup> in recognition that the 911 workforce is composed of public safety professionals.
2. Leverage the visibility campaign (see chapter three on reintroducing 911) to advocate for competitive salaries and benefits commensurate with other public safety service providers to include retirement benefits, medical benefits, and mental health supports.
3. Expand access to the 911 profession.
  - Create a professional training track similar to other public safety service providers within colleges, technical schools, and workforce development programs and [fund tuition reimbursement and/or loan forgiveness](#) (see chapter nine on national support), as described further under Recommendation 7 in chapter nine. For example, the [College of DuPage in Illinois](#) has a 911 dispatcher course, and Middlesex Community College in New Jersey has a [911 professional training program](#). The University of Pittsburgh Medical Center is also launching a program called "[Freedom House 2.0](#)," which is designed to recruit individuals from economically disadvantaged communities for emergency medical services training. Freedom House 2.0 is modeled after the original "[Freedom House Ambulance Service](#)" and associated training program that were designed and operated by Black men and women from Pittsburgh, who served as paramedics. Freedom House Ambulance Service began in 1967 and was disbanded in 1975, when the city took it over.

---

<sup>67</sup> The BLS definition of Protective Service Occupation includes other first responders, such as police and firefighters, detectives, inspectors, corrections officers, specialized police, animal control, security guards, lifeguards, crossing guards, and other similar professions: <https://www.bls.gov/oes/current/oes330000.htm>.

- Create a credentialing system that doesn't rely on advanced degrees or years of formal education but that provides minimum standards and appropriate training (see also Action Step 4 in this recommendation, below).
    - For an example, see New York's [Credentialed Alcoholism and Substance Abuse Counselor](#) (CASAC) credential from the field of substance use and addictions counseling. The minimum education requirement for obtaining a CASAC credential is a high school diploma. A trainee certification ([CASAC-T](#)) is also available after achieving a certain number of training hours for those just starting out in the field.
  - Examine and address exclusionary (e.g., criminal history) and required criteria (e.g., traditional educational attainment) for hiring professionals for the entire first responder ecosystem (e.g., 911 professionals, alternative first responders, and hotline professionals).
    - Determine and document the opportunities, barriers, and restrictions. Assess their impact and relevance and remediate as possible. This recommendation is addressed in part in chapter nine on national support, calling for the creation of a federal grant program run by the National Academy of Sciences panel to bolster, among other things, operational transformation and personnel supports.
  - Invest in the talent pipeline to reflect the demographic composition of the communities served.
    - A well-known example of this is the [CAHOOTS](#) program in Eugene, Oregon. CAHOOTS has been in the spotlight for a number of reasons over the past few years, but perhaps one of the lesser known reasons for its success is that the program intentionally recruits people with lived experience from the community, which has allowed them to build [high levels of community trust](#).
    - Another example is the [Found in Translation](#) program, which trains low-income bilingual women to become interpreters in medical settings. The program is free of charge and is designed to both enhance the medical interpretation field and the lives of women in difficult circumstances. This program also offers a model to advance the credentialing and availability of sorely needed and essential translation services to effectively respond to 911 callers who prefer speaking in languages other than English and the 911 professionals and the systems who require additional support in this area.
4. Take active measures to foster the career development and workplace retention of fully successful 911 professionals, in recognition that reducing turnover not only improves the effectiveness of 911 as a system but also saves money that can be redirected to increase salaries and benefits.
- Develop best and emerging practices elements within the ECC related to employee wellbeing and including employee voices, such as peer support, wellbeing, recognition, and diversity equity and inclusion programs.
    - Create a mechanism for employees to provide input on policies and procedures.
    - Identify, encourage, and develop career advancement opportunities within the 911 profession.
    - See, for example, a recent legislative bill in New Jersey [designed to protect the wellbeing of first responders](#)—including 911 professionals—by prohibiting their employers from discharging or discriminating against them for issues related to experiencing post-traumatic stress disorder symptoms, a risk for many first

responders, including 911 professions.<sup>68</sup> Bills such as this are meant to encourage first responders to seek the help that they need without fear of repercussions.


- A strong example of an organization that invests in employee wellbeing is Valley Comm 911 in Washington state, which has an [internal peer support and mentor program](#). They also have a public [standard operating procedure on employee wellness](#) that other centers might draw from.
- Invest 911 professionals with power in governance decisions.
- 5. Ensure that the 911 workforce is equipped for the challenges of today and tomorrow.
  - Develop training modules and ECC guidelines to ensure 911 professionals are equipped to address increasing community-level events (e.g., climate emergencies, civil unrest, mass casualty events, etc.).
  - Ensure 911 professionals have a deep understanding of the impacts of race and racism on emergency response and understand how to mitigate racism's negative impacts and view it as a core part of their service to the community.<sup>69</sup>
  - Ensure 911 professionals have the training and equipment to interface with emerging technologies.
  - Conduct and act on a biannual survey of 911 professionals to
    - identify local and national needs for more training and support directly from those taking and dispatching calls;
    - understand challenges and develop new career progression and retention strategies, and;
    - collect feedback from dispatchers and responders about the options available to them, the scope and nature of information provided from the call, and the outcome of the response; use this to inform call-taking protocols and procedures for medical, police, fire, behavioral health, and other public safety incident calls.
  - Implement a certification requirement, similar to certification required for law enforcement, fire, and emergency medical providers that requires periodic renewal.
    - Ensure certification includes minimum training hours and standards covering relevant content, including history, language and disability access, context and progression of 911; diversity, equity and inclusion and implicit bias training related to 911 interaction with public, coworkers, and fellow public safety providers; familiarization with the demographic and socioeconomic background of the jurisdiction(s) served; and considerations regarding the fact that 911 professionals are not required to give Miranda warnings, yet their conversations with callers can often be admitted into evidence during prosecutions and other court proceedings.
- 6. Expand the capacity of other elements of the first responder ecosystem, recognizing the expertise of people with lived crisis experience.

<sup>68</sup> See *Transform911: Assessing the Landscape and Identifying New Areas of Action and Inquiry*, <https://www.transform911.org/resource-hub/transforming-911-report/>, chapter one, "Professional Career and Supports" for an extensive discussion, summary, and evaluation related to the workforce conditions and trauma exposure of 911 professionals.

<sup>69</sup> See *Transform911: Assessing the Landscape and Identifying New Areas of Action and Inquiry*, <https://www.transform911.org/resource-hub/transforming-911-report/>, chapter four, "Emergency Communications Center Operations" for a summary and assessment of the limited data currently available on this topic as it relates to 911.

- Highlight and center the knowledge of peer specialists who understand the nuance of particular types of crises (e.g., drug overdose, mental health crisis).
  - Hire from within the community. For example, recognizing the need to both support the chronically underemployed and boost its 911 professional workforce, [Washington, DC](#), developed partnerships with community colleges to train underemployed residents to become 311 call takers. The program also offers career ladders such that those trained in 311 can grow into trained 911 call takers.
  - Hire staff to be responsible for creating and managing the community's wellness approaches. For example, Tucson, Arizona, created a Community Safety, Health & Wellness program and [hired a director](#) with years of experience working with communities and city government to advance wellness.
  - Response teams, including responders such as social workers and conflict mediators, should also be recruited locally and given the training, compensation, and support they need to serve well.
  - Another example is [San Francisco's Street Crisis Response Team](#), which intentionally hires peer support counselors and others with lived experience in order to help facilitate trust, particularly by those who may be skeptical of other city-led outreach efforts.
  - In [New London, Connecticut](#), the Department of Health and Human Services is using [American Rescue Plan](#) funds to support community wellbeing, especially among those adversely impacted by the pandemic.
7. Strive for consistency and parity with and between all elements of the first responder ecosystem, including 988 professionals and on-scene and virtual responders, professionally and operationally.
- Extend reclassification, training, and recruitment efforts to this part of the workforce ecosystem.
  - Ensure all first responder ecosystem professionals have the ability to provide warm handoffs among various services when consent is given.
  - Foster sustainable and fair work for all first responder ecosystem responders, including living wages, appropriate benefits, minimum training and supports, adequate breaks and time off, and safeguards against burnout and secondary trauma.
  - Consider every professional who responds to 911 calls for service and hotlines as first responders. Recognize that all first responders face the same or similar threats, challenges, and exposure to trauma. Creating distinctions between these responders minimizes the important role of all professionals who make up this ecosystem and may create or perpetuate unproductive divisions.
  - Ensure that BOTH 911 and 988 (as well as other hotlines) are [sustainably funded](#). 911 systems have experienced years of [disinvestment](#). As 988 is implemented in July 2022, some states may be tempted to [draw on existing 911 funds](#) to close funding gaps for 988. While 988 deserves strong support, this should not come from a 911 system that in many respects is already [struggling to secure funding](#).
8. Create, fund, and require implementation of quality assurance mechanisms.





## Chapter Six: Making 911 Independent and Equal

*ECCs that are independent and equal to other local first response systems help improve equitable outcomes.*

**What are we calling for?** We are calling for local 911 Emergency Communications Centers to be independent and equal public safety departments equipped to tap a diverse range of responses to best match the response to each emergency. This requires removing the default to police or another system common in many communities when ECCs are housed within law enforcement or another emergency response agency.

**Why is this essential?** The mission and function of ECCs across the nation have transformed from simple information transfer stations to critical points in the public safety incident life cycle where resource deployment and tactical decisions are made. The leaders of these agencies need autonomy to address issues that affect the greater public safety mission of a jurisdiction that has proven practically and politically difficult when ECCs are in a subordinate position (usually within or to police and/or fire).<sup>70</sup> An experienced emergency communications professional should be in an equal position to fully inform elected officials, governing bodies, and the public without fear of recourse or concerns about being minimized or questioned by other public safety agencies.

Under current practice, ECCs are often neither independent nor equal to other first response agencies. It is critical that these centers and their 911 professional leadership receive greater autonomy in deciding what the response to a call for service will entail.

Currently, ECC staff are tasked with classifying a call, while the partnering response agency (e.g., EMS, fire, police) dictates what the response will be, who will carry it out, and what tools will be used. While trained and supported 911 professionals have expertise in translating need to these other agencies, the current system does not leverage the reality that the 911 professional is the first responder most relationally proximate to the emergency before help arrives on the scene. The nuance and insights gained in a call, interpreted by a trained and supported 911 professional (see chapter five on the workforce), offer tremendous value for ensuring that the right response is deployed at the right time (see chapter seven on the right response).

Furthermore, EMS, fire, and law enforcement agencies are often understaffed and overtaxed and responsible for advancing a mission and vision outside the direct scope required to effectively handle and dispatch calls for service. The current practice of tasking these other agencies with the call-taking and dispatching functions can introduce additional burdens and divert front-line and executive-level staff members' attention from the core mission for which their agencies are responsible and should be held accountable.

---

<sup>70</sup> See *Transform911: Assessing the Landscape and Identifying New Areas of Action and Inquiry*, <https://www.transform911.org/resource-hub/transforming-911-report/> for the limited research and discussion related to this recommendation. This is an area in which empirical evaluation is wanting, however. Through the Transform911 workgroup deliberations and data shared from involved practitioners, i.e., the practitioner-based evidence gleaned through the Transform911 workgroup processes, this a reality that has been well established and understood for and among 911 practitioners and leaders nationwide.

We therefore envision a 911 system in which the ECC has greater authority in designing and directing the response, with this recommendation helping to meet this objective. The 911 professional has taken the information in and should be empowered to help define and direct the response. The ECC in which the 911 professional works should similarly be empowered to craft and monitor the related policies and governing practices, rather than simply having to follow another agency's operating procedures. This will further allow the other agencies to redirect time and attention currently spent on leading in the creation of a response plan to collaborate here and then to direct more resources to the response.

Consolidation and/or independence have been under consideration by many ECCs in recent years. Consolidation is sometimes seen as controversial because it can be viewed as running counter to local control. A perhaps less controversial framework is the shared services model, designed to [cut costs](#) through leveraging resources across ECCs. In recent years, several jurisdictions have consolidated and/or become independent, including [Nashville and the District of Columbia](#), which both consolidated all emergency communications (e.g., police, fire, and EMS) into independent city agencies that report directly to their respective mayors. Other examples include New Orleans—whose ECC became independent after its [struggles during Hurricane Katrina](#)—as well as those in [Tucson, Arizona, and Camden, New Jersey](#).

Making ECCs independent and equal departments offers the opportunity to encourage specialization, greater focus, enhanced prioritization, and progress toward excellence across agencies for mission advancement and alignment. The independence and equality of agencies also allows more opportunity for the public to better understand the role of each agency, the associated governing practices and structures, and as such can create more straightforward pathways toward achieving full accountability and transparency.

Another critical part of this recommendation is empowering local leadership. The geographic and cultural differences across this country are vast, and local agencies have on-the-ground knowledge that federal and even state-level agencies lack. There is an opportunity for federal support and guidance (see chapter nine on national support), while leaving ECCs under local leadership where they are best positioned to respond to the needs of the people and communities they serve.

### **Actions:**

1. Locally position 911 as independent from other first responders such as EMS, fire, and law enforcement and as an equal partner in promoting public safety.
  - Include planning and support for culture change as well as to ensure that this is not seen as “punitive” by EMS, fire, law enforcement, or others.
  - Empowered to deploy the appropriate response and reach out to non-police responders if the current ecosystem of response options is not equipped to handle the emergency.
  - As recommended in chapter four on the people, ECC governing boards and authorities should also be representative of the communities they serve, including representation from historically underrepresented groups.
  - Other professionals who work in complex organizations have chosen independence. For example, some physicians choose to practice independently from the hospitals where

- they admit patients.<sup>71</sup> These physicians have more control over their practices and will join other independent doctors to save money on expenses that hospitals cover.<sup>72</sup>
2. Increase coordination among ECCs and encourage infrastructure in regional efficiencies where feasible.
    - Examine potential needs and opportunities for reducing the sheer number of ECCs in operation to make the rollout of new initiatives, implementation of new technologies, and operationalization of standards more feasible.
      - Achieve economies of scale while maintaining relevant ties to local communities
    - Consider consolidation of physical spaces and/or shared technologies that may cut costs and introduce operational efficiencies.
      - The cost of operating an ECC with cutting-edge, lifesaving technology can be prohibitively expensive, particularly in the most economically vulnerable areas of the country like rural areas and sovereign tribal lands.
    - Introduce and bolster NG911 technologies as opportunities to virtually consolidate and share resources, such that some physical consolidations might not be as necessary.
      - In this way, consolidation can support local control and priorities and open up additional efficiencies and cost savings (while still serving the local community's interests).
  3. Understand gaps in service demand and capacity to meet the needs of the community to assist in the development and shift of certain emergency calls for service away from traditional emergency response option(s) initiated and served by 911.
    - Conduct a comprehensive gap analysis in service demand and capacity to determine which calls would best be served by hotlines and/or alternative responses.
    - Analyze EMS, fire, and law enforcement calls for service data.
    - Engage communities to define priority crisis scenarios.
    - Map existing resources within the community.
    - Build upon existing community resources through cross-system mapping, information-sharing agreements, and the development of standardized tools.
    - For example, in RTI International's Carolina Cohort of Cities Project, RTI began by helping each of the seven cohort cities to conduct a sophisticated analysis of their calls for service data, including call types, frequencies, resource allocations, and dispositions/outcomes. These analyses helped the cities identify baseline needs and gaps in services. Some cities used this to establish 311 systems for non-emergency calls. Others were able to create partnerships to address identified priorities. Each city was then able to choose response options in a data-driven way.

<sup>71</sup> See, for example, this patient-focused article on why to choose an independent physician over a hospital system: <https://oncologycharlotte.com/9-reasons-to-choose-an-independent-physician-instead-of-a-hospital-system/>.

<sup>72</sup> American Academy of Family Physicians, "Independent Physician Associations (IPAs) Definition," <https://www.aafp.org/about/policies/all/independent-physician-associations.html>.



## Chapter Seven: Ensuring the Right Response at the Right Time

*A diverse ecosystem of responses reduces  
reliance on the police by default.*

**What are we calling for?** We are calling for significant investment in a diverse ecosystem of response options so that callers can be met with the right response at the right time. These response options can and should include the availability of experts in triaging crises in ECCs as well as connections that enable 911 professionals to transfer calls to hotlines or virtual and on-scene responders skilled in managing a host of community needs, including homelessness, mental health crises, substance use crisis, and domestic violence.

**Why is this essential?** People call 911 for a wide swath of reasons, ranging from noise complaints to mental health crises to requests for information and much more, and though only a small fraction require a law enforcement response, nationwide 911 professionals do not have a diverse ecosystem of responses to deploy. For this reason, it is critical that the 911 system move away from police as the default response by tapping into a more robust, relevant ecosystem including, but not defaulting to, police. This transformation is essential to ensure that 911 can provide access to a full range of appropriate immediate responses around the clock to support callers' wellbeing and relief from distress when their social networks and the people and resources around them are not sufficient to address the crisis appropriately.

While police are one resource that may merit deployment, they are the default for most 911 systems nationally, even though more than 75% of 911 calls for service dispatched to the police are not related to public safety threats that obviously merit a law enforcement response.<sup>73</sup> This is an artifact of the history of 911,<sup>74</sup> attitudes and assumptions within the first responder ecosystem, and the general public (where 911 and the police are often conflated), and the reality that many ECCs currently are divisions within, and therefore subordinate to, law enforcement agencies. This creates significant mismatches for both the community and the police.

In a qualitative study of the history of 911 conducted by Transform911 partners from the Black Belt African American Genealogical and Historical Society, people who were in or around Haleyville, Alabama, in 1968 (911's birthplace and year, respectively) who were interviewed in focus groups reflected predominately on medical emergencies, not police encounters. This same group expressed the opinion that emergency services differ greatly between urban and rural areas, with callers in rural areas having to endure long response times and ultimately not receiving the right response with the right tools for their needs. Due to this inconsistency of services, some expressed concerns about calling 911.

---

<sup>73</sup> S. Rebecca Neusteter et al., "Understanding Police Enforcement: A Multicity 911 Analysis," Vera Institute of Justice, September 2020, <https://www.vera.org/publications/understanding-police-enforcement-911-analysis>.

<sup>74</sup> 911 was first activated in the United States in 1968, under then President Johnson, with the goals that 911 would (a) reduce first responders' response time; (b) increase arrests; and (c) allow a more immediate response to crime. President Johnson was warned at that time that 911 would likely attract calls that didn't involve threats to public safety or exigent harm. As jurisdictions across the country began to implement 911 locally, many of these early adoptions only included police as potential responders. New York City offers one such example. When New York City launched 911 on July 1, 1968, calls for police response increased by 40% in just the first year, with fewer than half of these calls stemming from emergency situations, and resulting in 7.5% more police deployments.

These interviews highlight the need for consistent, reliable, timely, appropriate, and accessible responses.

Many communities have semiformal and formal resources that allow them to address crises in ways that are responsive and sensitive to the particularities of the community that can fill out the first responder ecosystem. Ensuring that these responders are reflected in the response options available to 911 call takers and dispatchers is vital, as is ensuring a robust ecosystem of response options more generally. Many promising practices have been introduced to provide people with augmented access to appropriate medical, social service, and community resources in lieu of or in addition to EMS/fire/police response.<sup>75</sup> These responses can be in-person or remote, with the COVID-19 pandemic rapidly expanding the use of telemedicine for emergency services.<sup>76</sup> First responder ecosystem responders other than police, fire, and EMS can include non-law-enforcement government actors, professionals who accompany traditional responders, contracted community-based organizations, and community collectives. The ecosystem should address not only mental health and substance use but also false alarms, animal control, domestic altercations, traffic, and calls involving low-level crimes, among others.

The most important elements of the field responder ecosystem are that they are both responsive to community needs and tailored to those experiencing the emergency. The choice between responses that involve police and those that don't may be a false choice. There are credible reasons for deploying both types of responses, depending on the circumstances. For example, some localities may be hesitant to send non-police teams to calls that involve a crime in progress. However, in many cities, trespassing is a crime—and often one that may involve unhoused individuals. Similarly, in some places, there may be hesitancy to send non-police response teams when it is unknown whether the subject of the call is armed with a weapon. However, while one may be able to say with certainty whether someone in their household has access to a weapon, one can never be certain of this when calling about a third party, like a stranger on the street who appears to be experiencing a mental health crisis. Many would agree that responding to either types of these calls should involve social workers or others who are trained to address the underlying needs. Whether or not the response should also involve police will depend to some degree on local circumstances. We therefore support not one over the other but instead support responses that truly meet community and individual needs.

Instituting additional response options simultaneously free up law enforcement officers' time so that they can redirect their efforts where they can be most impactful, and it provides appropriate responses for all community members, including those who face crises but who won't call 911 for fear that doing so could precipitate an uncomfortable, distressing, or even lethal encounter with law enforcement.<sup>77</sup> This concern may be particularly salient among people of color; people who are undocumented; people who have unmet mental health needs or substance use concerns; people who are engaged in sex work or other illegal activities; and/or people with intellectual, developmental, and/or physical disabilities.

<sup>75</sup> Matt Delaus, "Alternatives to Police as First Responders: Crisis Response Programs," Albany Law School Government Law Center, November 16, 2020, <https://www.albanylaw.edu/government-law-center/alternatives-police-first-responders-crisis-response-programs>.

<sup>76</sup> National Highway Traffic Safety Administration, "FICEMS Releases Telemedicine Framework for EMS and 911," Federal Interagency Committee on Emergency Services, May 2021, [https://www.911.gov/pdf/Telemedicine\\_Framework%20May\\_2021.pdf](https://www.911.gov/pdf/Telemedicine_Framework%20May_2021.pdf).

<sup>77</sup> Matthew Desmond et al., "Police Violence and Citizen Crime Reporting in the Black Community," *American Sociological Review* 81: 5 (2016) <https://www.documentcloud.org/documents/3114813-Jude-911-Call-Study.html>; Emily van der Meule et al., "'That's Why People Don't Call 911': Ending Routine Police Attendance at Drug Overdoses," *International Journal of Drug Policy* 88 (2021), <https://www.sciencedirect.com/science/article/abs/pii/S0955395920303777>.



Hotlines serve an important role for community members who have been inadvertently harmed by institutional emergency responses to crises and could provide continued support as efforts are made to transform the operations of, and available responses by, centralized emergency response centers. A key piece of the ecosystem is the new 988 suicide prevention and mental health crisis hotline that will launch nationwide in July 2022. Individuals who call or text 988 will be connected to a trained counselor who will listen and provide support and connections to needed resources. 988 offers opportunities to decouple care and support from enforcement and is long overdue. Of course, implementing 988 will require us to address many strategic and operational details. Many of the recommendations from this blueprint should also be applied to the new 988 system.

A comprehensive ecosystem of responses should include robust, well-marketed, and transparent hotline options, including both those directly connected and not connected to centralized emergency response centers. When effective, widely known hotlines are available; they may also reduce the burden on the 911 system while channeling callers more efficiently to appropriate resources. This transformation is essential to ensure that 911 can provide access to a full range of appropriate immediate responses around the clock to support callers' wellbeing and relief from distress when their social networks and the people and resources around them aren't sufficient to appropriately address the crisis.

## **Actions:**

### ***I. Regarding Alternative Responses:***

1. Prioritize connecting 911 to the least restrictive, most therapeutic responses possible. Consider that even in some dangerous situations, police may still not be the right response or be equipped to successfully resolve the acute need. Unnecessary police encounters introduce risk of arrest, trauma, and injury.<sup>78</sup>
  - Review 911 data to identify community needs that are best met by service providers other than armed police officers. These needs will likely include mental health and substance use concerns, homelessness, domestic abuse, and minor conflicts.<sup>79</sup>
  - Conduct a community asset map to identify existing resources; build on what is already there and identify what is missing.
  - Create structures for data sharing and coordination.
  - The city of Albuquerque, New Mexico, created the [Albuquerque Community Safety \(ACS\) department](#), which responds both to 911 and 311 calls to provide an alternative to a police response to mental illness, substance use, and homelessness issues. Calls are triaged by 911 or 311 to the ACS department, which then sends either a co-responder team (police officer and mental health professional), a mobile crisis team (two behavioral health responders), or community responders. The agency also has street outreach to provide assistance in coordination with other city agencies to address problems related to homelessness.
  - In Raleigh, North Carolina, city leaders are exploring the creation of a non-police auto accident response program. Currently, North Carolina state law mandates that police officers investigate all traffic crashes, and an analysis of Raleigh's calls for service suggests that officers spend an inordinate amount of time on such calls. However,

<sup>78</sup> We envision a limited scope in which 911 can directly connect with secondary responders. To be clear, we are not recommending that 911 should be a switchboard for all human and social services.

<sup>79</sup> *Transform911: Assessing the Landscape and Identifying New Areas of Action and Inquiry*, <https://www.transform911.org/resource-hub/transforming-911-report/>.

rather than attempting to change statewide law, Raleigh and several other North Carolina cities are seeking to pass local legislation, which would then be recognized by the state, allowing them to send non-sworn personnel to accidents that do not involve injury.

- Washtenaw County, Michigan,<sup>80</sup> recently launched its Community Responder Services program, a mental-health-related response partnership between the Washtenaw County Sheriff's Office (WCSO) and Washtenaw County Community Mental Health (CMH). This multidisciplinary response program will deploy a sheriff's deputy and a trained behavioral health clinician who will respond together to provide full spectrum, trauma-informed care. Prior to launching the initiative, WCSO and CMH conducted extensive focus groups with people with lived experience, service providers, and service provider leadership. The program's primary stated goal is to provide the most appropriate service possible to individuals experiencing mental- and/or behavioral-health crises.
- 2. Emphasize and prioritize trauma-informed, culturally sensitive, person-centered responses that conform to the following principles:
  - Empower the community to lead and direct response:
    - Listen to community voices every step of the way—starting with and consistently returning to the people most impacted for feedback and ideas.
    - Build community ownership.
  - Ensure that response organizations are based in and know the culture of the communities they serve. Fund and contract with existing organizations and nonprofits to respond.
  - Focus on community knowledge and supporting existing community solutions, which may be informal but are centered in people's real experiences and needs. Invest in the people who have done this work historically without compensation.
  - Recognize that crisis response may not look the same every time or for every person.
  - Honor the individual's particular needs.
  - Think about the solution that the community wants, and then what tools are needed to get to that solution, when designing alternative response systems.
    - An example of an approach to gathering community input on decision-making in the police department is the Tucson, Arizona, Police Department's recent [community safety survey](#), which launched in partnership with [Just Communities Arizona](#). The survey will gather community reactions and suggestions for the department's Community Safety, Health and Wellness Program, which aims to address race disparities.
  - 911 should offer a menu of responses that are tailored to the need. In some cases—including, for example, those where violence is occurring or is likely—police involvement is likely warranted. However, in many instances, police may not be necessary and may in fact be counterproductive. Responses should be tailored to the situation as well as the milieu and context in which the response is occurring.

## ***II. Regarding Alternative Hotlines:***

---

<sup>80</sup> See this longform piece in Politico about the personal impacts of reforms happening in Washtenaw County: <https://www.politico.com/news/magazine/2021/07/30/police-reform-mental-health-illness-ann-arbor-race-501344>.

3. Develop a streamlined process with protocols to receive and transfer emergency calls from 911 centralized ECCs to hotlines for particular calls for service types.
  - For example, in Harris County, Texas, behavioral health specialists are [embedded](#) with traditional 911 call takers to [decrease reliance on police](#) to respond to non-emergency mental health calls. This partnership between the Houston Police Department, the Houston Fire Department, the Houston ECC, and the Harris Center for Mental Health and Intellectual and Developmental/Disabilities allows all of the partners to work from the same technology platform, allowing for streamlined call handoffs, faster response times, and more appropriate responses.
4. Ensure marketing of hotlines and training for call takers to assist in developing trust amongst partners and callers by promoting transparency in what to expect during a call for service and emphasizing that callers make their own informed decisions.
  - An example of this is the [Policing Alternatives and Diversion \(PAD\)](#) initiative in Atlanta, Georgia, which accepts calls from 311 to connect to people in crisis. PAD organizers are active in their communities to introduce the resource and accept opportunities to participate in media about the resource.
  - The [Trans Lifeline](#) provides support to the trans community when they need it through a 24/7 bilingual crisis hotline staffed by trans people. The lifeline abides by several key principles to care for the privacy of those who call them—all information is kept strictly confidential, and no other party will be engaged in the call unless the caller provides consent.
5. Position hotlines—both those that fall within the 911 interoperability infrastructure and those that don’t—to provide immediate access to personalized supports for callers through the following:
  - Offer comprehensive training to hotline call takers, instructing them on how to identify the caller’s need, prevent or de-escalate an emerging crisis, and advocate on behalf of the caller to ensure timely warm handoffs to community services and resources as appropriate.
  - Have a mechanism in place to follow up with a caller after the crisis has been resolved, as appropriate and consented to by the caller. We refer to these approaches as “second response.” Why is this important to consider in the context of 911? First or crisis response is really about how to manage an event. While improvements to first response are both critical and necessary, they are also insufficient because even the best iteration of crisis response will do little to meet underlying needs. Typically, what happens in the aftermath of a 911 call is nothing. Second response is about intervening after the fact to prevent that next 911 call from happening. It involves following up with individuals, but doing so when they are not in crisis to make sure they are connected to the social support and treatment they need.
  - Equip hotlines with the capability to deploy mobile responses where and when appropriate.
6. Establish hotlines that are cost free, sustainably funded, widely accessible, and equipped to support high call volumes around the clock.
  - In the context of 911, the [FCC requires wireless carriers to transmit all 911 calls](#) regardless of whether the caller subscribes to the carrier’s services or not. This same rule should apply to all similar hotlines.
  - We also note that the rules regarding the transmission of a 911 caller’s geolocation [continue to evolve](#). We strongly support an ever-increasing standard for geolocation accuracy for 911. It is important to note, however, that while most 911 callers may

expect their location to be shared with great accuracy, callers to other hotlines may have a different expectation of privacy,<sup>81</sup> particularly given the potentially sensitive nature of their calls (e.g., in the context of mental health crises or suicidality). Thus, in the context of these other hotlines, the transmission of caller geolocation should be considered with great care and attention paid to properly balancing the helpfulness of accurate geolocation with these privacy expectations.

- Create safe and accessible options for support to as many people as possible, by providing technology for multiple access points (i.e., phone, text, chat, email, website, including access to certified interpretation services: e.g., ASL, spoken language).
- Offer hotlines at no cost to callers, whether they call from pay phones or cell phones.
- Equip hotlines with the infrastructure to operate 24/7 as would align with centralized ECCs and the capacity to support callers during times of high 911 call volumes for relevant calls for service.
- Many cities already offer hotlines such as 311. Funding for these hotlines varies, but some cities, like New York City, offer a model for sustainable funding by incorporating 311 into the Department of Information Technology and Telecommunications' annual [operating budget](#).
- As recommended in chapter five on workforce, action item 7, we must ensure that 911, 988, and other hotlines are sustainably funded and that one system isn't [deprioritized in order to fund the others](#).

---

<sup>81</sup> The FCC hosted a forum around geolocation and privacy challenges for 988 in May 2022: <https://www.fcc.gov/news-events/events/2022/05/forum-geolocation-988>.

## Case Studies: Alternatives in Action

### STAR

Denver, CO

The [Support Team Assisted Response Program](#) in Denver, Colorado, deploys a team of emergency medical technicians and behavioral health clinicians to engage people experiencing crises related to mental health, poverty, homelessness, and substance use. It is available by calling 911 or the city's non-emergency number. The program is starting to show some [positive impacts](#) and was recently [expanded](#) citywide and 24/7.

### CARE

Chicago, IL

The [Crisis Assistance Response and Engagement program](#) in Chicago, Illinois, takes a multi-pronged approach to alternative crisis response. First, the city is embedding mental health clinicians into the ECC to provide support to callers, dispatch, and response teams to preempt cyclical calls with a mental health component by attending to underlying needs and resolving issues without the need to dispatch response teams where feasible. Chicago is also deploying three alternative response models, including a multidisciplinary response team (which includes a crisis intervention team-trained officer) as well as two forms of non-police response teams (one model is composed of a community paramedic and a mental health professional; the other includes a community paramedic and a peer support specialist). Post-response, the program will work to link residents to community-based services to address the underlying needs and will offer geographically distributed drop-off sites for persons experiencing a behavioral health crisis, as alternatives to emergency rooms, to provide more comprehensive care.

### DV Response

St. Joseph County, IN

[Domestic Violence Incident Response and Support Team](#) in St. Joseph County, Indiana, is a dedicated domestic violence multidisciplinary response team, including a police officer and a social worker, both of whom are trained in trauma-informed approaches. The team responds to the scene together to ensure safety and immediately link survivors with mental health resources, shelter options, food, and/or transportation. As part of the grant supporting the program, officers in the department get training in how best to respond to domestic violence situations and the influence of trauma on survivors and their families.



## HOME

San Francisco, CA

[Homeless Outreach and Medical Emergency \(HOME\) Team](#) in San Francisco, California, delivers comprehensive care, including linkages to social services and medical treatment, to frequent 911 utilizers who compose as many as 40% of the medical transports in some cities. The HOME team primarily serves people experiencing homelessness, poverty, mental illness, substance use, or living with disabling conditions.

## CAMP

Los Angeles, CA

Case Assessment Management Program (CAMP) in Los Angeles, California, manages cases involving people with a history of mental illness, ranging from those with a history of violent criminal activity caused by mental illness to those who frequently utilize police resources. Mental health professionals' pair with detectives to explore solutions to persistent situations that result in large numbers of calls to the police. [CAMP was selected as a Bureau of Justice Assistance learning site](#) and offers technical assistance to other agencies.

## CCBHC

Nationwide

Certified Community Behavioral Health Clinic (CCBHC) Medicaid demonstration programs have been launched in 10 states across the US. The [CCBHC model](#) is congressionally approved, creating a new Medicaid reimbursement approach for mental health and substance use prevention, treatment, and recovery service delivery. CCBHCs focus on delivering whole health care and comprehensive access to a full range of medical, behavioral, and supportive services to meet the needs of their communities. CCBHCs must be able to provide clinicians and paraprofessionals who can respond on site to a person in crisis and thus make good partners as alternative responders. Staff can also be embedded in a 911 call center. In Austin, Texas, for example, integral care clinicians are embedded into the Austin Police Department's 911 Call Center and were able to divert 82% of calls from law enforcement response.

## Domestic Incident Recommendations

Domestic violence incidents and domestic disturbances are potentially volatile and unfortunately a relatively common type of 911 call that often results in police response. Yet the presence of police is not always the most calming or supportive option for the involved parties, who may include children and other family members. Moreover, these calls tend to cause police officers, agencies, and municipal governments great concern, as they can pose grave risks for police officers, 911 callers, and other community members. Due to the critical and sensitive nature of these incidents, and the scarcity of innovative alternatives to police responses and police co-responses that have been developed and implemented to date, Transform911's Alternative First Responders workgroup worked diligently over the course of this effort to devise a novel set of recommendations and considerations on how best to respond to them. This diverse workgroup consisted of law enforcement officers, community advocates, and other stakeholders with unique experiences. The recommendations were further refined in response to edits from experts in the domestic violence community.

Deploying unarmed alternative responders, including trained conflict mediators, crisis de-escalators, social workers specializing in trauma, and other appropriate professionals, could result in a response that better meets the needs of the involved parties and sets them on a path to healing and conflict reduction. These responders may be dispatched with or instead of police, or after/before police, depending on the situation, and should be held to rigorous minimum training and supervision standards. Unarmed alternative responders can de-escalate immediate conflict, assess danger, provide support and resources, and conduct follow-up care, creating support structures for safer communities and families.

### Action Items:

1. Collaborative response models, including police and unarmed conflict mediation/de-escalation/social work professionals/domestic violence advocates/victim service providers ("alternative responders"), should be implemented to respond to incidents of intimate partner violence, domestic violence, and domestic disturbances. These incidents may include different combinations of family members or partners and particular care needs to be taken when children are present. The role and involvement of each responder should be based on the volatility of each situation, as determined by a 911 call taker, in conversation with an involved party or witness, and with care for the involved parties (survivors of violence, people accused of perpetrating violence, and other people present, including children) as a priority. Care should be taken to consider that the presence of armed police and/or an arrest may heighten tensions in the situation, particularly for people of color.
  - For example: if firearms are not known to be present and no physical injury has been reported, it may be appropriate for an alternative response unit to respond to the incident alone, without law enforcement officers.
    - Police may then arrive later to take statements or file reports, as needed or requested, after the conflict has been de-escalated.
    - If the conflict escalates to physical violence, alternative responders should be able to request police support.
  - When ongoing physical assault or battery is reported, conflict mediators and/or trauma counselors should respond along with police and medical personnel.
  - If a caller is not in immediate danger, either reporting ongoing abuse or a past incident, it may be appropriate to send alternative responders without police, particularly if the caller makes frequent calls for service about the same issue.

2. Alternative responders should be selected based on community knowledge and credibility, including community regard/existing roles and previous intervention as a bystander or volunteer. Legitimacy needs to be built within the neighborhood—responders should be trusted as individuals and as competent responders.
  - This goes beyond being in a “peer” or “lived experience” category—ideally, responders will have existing relationships within the community/neighborhood in which they work. Having expertise or skills in de-escalating conflicts in their neighborhood is an important asset.
3. All responders should take a trauma-informed approach and be prepared to de-escalate incidents, prioritize safety, and provide resources. Alternative responders should also be equipped to mediate interpersonal conflict, offer advocacy, and provide other support.
  - For example, Dayton, Ohio, has developed an unarmed mediation response unit to intervene in minor, nonviolent issues. Mediation staff are trained in de-escalation techniques and can spend more time with parties than police can.
  - Depending on the safety and risk assessment by the 911 professional, law enforcement or alternative responders can be dispatched.
  - Mental health crisis de-escalation training alone is not enough, nor is de-escalation training designed for a controlled environment (e.g., jail, inpatient unit) sufficient; specific minimum training standards for multiparty conflict in the field are necessary.
  - Responders should also be trained and required to assess for homicide danger and escalating risk of violence or trauma, using an appropriate tool. These assessments should be logged and stored so that repeat calls can be checked for a pattern of escalation over time.
    - Technology vendors and 911 governing bodies should enable and require careful logging, secure storage, and monitoring of data related to domestic violence incidents, with special care paid to the privacy and security of involved parties as well as to monitoring for increasing threat.
    - Responders should have training in intimate partner violence, gender identity, child neglect, elder abuse, signs of traumatic brain injury, confidentiality laws, and other relevant topics.
4. Alternative responders should follow up with individuals, perhaps through secondary responses, or through referrals (and, ideally, warm handoffs) to service agencies.
  - Follow-up care providers could be introduced by the alternative responder in person and/or via video call or other telehealth service to facilitate a virtual handoff.
5. Safety needs to be considered—both the safety of the responders and the safety of the parties involved in the incident.
  - 911 call takers tend to be conservative about sending unarmed civilian responders into potentially dangerous situations. However, social workers who do community fieldwork may be able to assess and defuse potentially volatile situations and should have the independence to decide to respond.
  - Situations considered “low-risk,” such as welfare checks, may be handled more safely by alternative responders than by police.
  - Legal liability and relevant statutory requirements will also need to be carefully considered as jurisdictions decide when to send alternative responders without police.
6. Care should be taken to minimize the feelings of threat that can arise from the presence of a first responder. For example, if bulletproof vests are worn, they should be worn underneath external clothing if possible.

7. It is important for communities devising new domestic abuse police responses to be aware that mandatory arrest laws can make it difficult to implement an alternative response that de-emphasizes arrest. Furthermore, collaborative response programs need to consider the fact that mandatory arrest in domestic violence situations can make situations worse for the family as a whole—that arresting a parent, sibling, caretaker, or primary source of income can increase the level of chaos experienced in a household, and arrest is associated with an increased risk of death (especially for African American families) of the partner.<sup>82</sup> Domestic violence incidents can also be among the most dangerous calls for police and other professionals to respond to. Moreover, the time period immediately following when a survivor tries to leave or has left is when they are most at risk of further abuse and death. Training for any responder or team should specifically address these complex issues. At the same time, care needs to be taken to seriously consider threats made against others in the household and what the best strategy is to keep people safe, including any professional deployed to respond. The collaborative response should focus on the survivor’s choice for actions taken whenever possible. The response should also include initiating safety planning for domestic abuse survivors and consider the following:
  - Creating stationary and mobile de-escalation and assessment centers or another place for people accused of initiating conflict to go voluntarily—besides jail—could be beneficial.
  - Creating, or resourcing existing instances of, temporary centers for survivors of domestic violence that prioritize the care and support of these individuals is a necessary complement to centers or units that intervene with people accused of initiating violence.

---

<sup>82</sup> Lawrence W. Sherman and Heather M. Harris, "Increased death rates of domestic violence victims from arresting vs. warning suspects in the Milwaukee Domestic Violence Experiment (MILDVE)," *Journal of experimental criminology* 11, no. 1 (2015): 1-20, <https://link.springer.com/article/10.1007/s11292-014-9203-x>.



## Chapter Eight: Strengthening Data and Tech Standards

*Reliable and ethical data and tech improves responses.*

**What are we calling for?** We are calling for uniform 911 minimum data standards and improved data collection practices, as well as the development and maintenance of transparent, consistent policies on the ethical use of technology and data in emergency response. This covers data privacy and algorithmic transparency for software systems built around emergency response data. Furthermore, we are calling for the adoption of clear and specific guidelines for standardizing, sharing, and making available emergency response data across the nation.

**Why is this essential?** Variances in data collection and transparency processes across jurisdictions, and the lack of a national 911 data collection effort, have hampered our ability to leverage data in the current state of things. Innovation and rapid, nationwide systemic improvements are made possible when data on emergency calls, responses, and outcomes are made available.

While we hold data transparency as a core value, we also recognize that emergency call data does include a host of highly sensitive and personal information. Callers to 911 must have the peace of mind that their wellbeing will not be undermined through the sharing of information that they assumed was private. Ethical and transparent communication and methods around getting caller consent for response and sharing information is essential.

Modern emergency management relies on the deployment of modern technology, not only to manage the response to emergencies, but to ensure that the public is able to access emergency services through technological means that work best for them. Ethical deployment of tech includes increasing equity in 911 coverage, as much as possible, for example, by using things like tele-response in rural and tribal areas.

The future will bring further developments in augmented intelligence, but as more and more information produced by automated systems is used to guide decision-making, it is essential that the algorithms employed are transparently developed and examined for inequitable outcomes. In short: if automated systems are guided by the inequitable decision-making processes of the past, inequity will be further baked into our systems.

To this end, recommendations below reflect that:

***It's not just about calls.*** Just as one might not have imagined the shift from landline to wireless calls to 911 in the course of a couple of decades,<sup>83</sup> a similar shift will occur over the next 20 years with the internet of things. Given the proliferation of apps, texting, wearable devices, drones, alarm systems, fire sensors, weather data, traffic data, and telemetry in general—the future emergency communications center will have a lot more data, coming from a lot more sources.

---

<sup>83</sup> The National Emergency Number Association estimates that, in most parts of the US, upward of 80% of 911 calls nationwide currently originate from wireless devices, <https://www.nena.org/page/aboutfaq2017>.



***It's not just about people.*** To handle the increased volume of information for ECCs, augmented intelligence (AI) will be essential to consistent and efficient emergency response. Software will be involved with everything from triage, diagnosis, classification, dispatch recommendation, automation, and even response. As AI involvement increases, so too does the possibility of exacerbating bias and inequities in emergency response.

- While structured and algorithm-based decision-making have been shown to be powerful tools in reducing individual bias (i.e., to decrease subjectivity in deciding who should be detailed or respond to 911 calls and in deciding which calls require immediate in-person response, etc.), if the underlying tool is based on data that itself reflects bias, the result can be a more consistent application of biased decision-making. When better tools are not available, communities and systems should work to counteract systemic bias by putting alternative or additional decision points in place.
- As AI systems are developed and deployed more widely, we also envision the establishment of a standardized, searchable, accessible public register of algorithmic development, implementation, maintenance, and sunseting to give the public a clear understanding of what's "under the hood" of the technology being developed and used in the 911 systems.
- The creation of a public register of algorithmic development, implementation, maintenance, and sunseting.

## **Actions:**

1. Adopt end-to-end NG911<sup>84</sup> to create equitable and effective emergency response outcomes.
  - Improve the security, reliability, and geolocation of emergency services in order to ensure better outcomes for callers, improve response times, and respond more efficiently to mitigate harms and save lives.
  - Improved interoperability and accessibility to allow for tailored services for multiple languages and individuals with disabilities, creating more equitable access to emergency services. Note: these advantages are only available when originating service providers are delivering calls on a modern IP (Internet Protocol) network.
  - Promote better sharing of data among agencies, jurisdictions, hotlines, and first responders to allow for more appropriate response to a range of community needs. (Please note that not all data should be shared—see below, action item 2 under this current recommendation and chapter, which pertains to emergency services data ethics).
2. Develop and maintain a policy on the ethical use of technology and data in emergency response, which covers data privacy and algorithmic transparency for software systems built around emergency response data.
  - Establish a national taskforce with a clear goal for ensuring data privacy, algorithmic transparency, and oversight in emergency response systems and with all stakeholders represented: impacted communities, vendors, 911 administrators, telecommunicators, first responders, behavioral health specialists, technologists, and policymakers.
  - Technology ethics would cover the algorithms used in decision-making—how they are developed, who owns the right to “know” what goes into the AI/machine

---

<sup>84</sup> NG911 is the preferred title for Next Generation 911 technology. More information about NG911 can be accessed at [www.911.gov/issue\\_nextgeneration911.html](http://www.911.gov/issue_nextgeneration911.html).

learning that is developed, in addition to where and how the training data is sourced, etc. This would change the sales cycle (and market for 911 tech), as a fire or police chief could ask, “How many of these guidelines does your technology meet?”

- Balance the collection of more data to improve service delivery with the privacy rights and protections afforded to all people. If we see the first responder ecosystem as having a role to play in addressing behavioral health and related issues, then what they know must be shared with organizations like treatment and housing, and vice versa, in ways that still protect people’s privacy.
  - Develop clear, plain language and explanations on the use of emergency response data including a description and purpose of any software algorithms, the data used, mechanisms for human oversight, and any risk-mitigation techniques.
  - Establish public registers of 911 algorithms: a standardized and searchable archive of algorithmic development, implementation, maintenance, and sunseting.
  - Algorithmic transparency may also include mandatory reporting requirements and the ability for callers and communities to request the data behind algorithmic decisions.
  - As an example, Pittsburgh, Pennsylvania, established a [public algorithms taskforce](#) in 2020. This taskforce has [spent the last two years](#) reviewing data, exploring potential problem areas, and identifying best practices; in March 2022, it released its first [report](#).
3. Support the refinement, maintenance, and adoption of uniform data standards for incident data to enable government transparency, achieve equity, and improve outcomes of emergency response.
- A common standardized approach to call classification, grounded in evidence, will provide a basic framework for communicating best practices in call response. This begins with 911 configuration.
  - To promote true interoperability among vendors, agencies, jurisdictions, and hotlines/responders, additional work must be done to further define uniform data standards and registries for call types, dispositions, etc.
  - The [911 Data Path project](#) is a good example of a project taking that next step with an open call for standardization efforts.
  - Further efforts should be made to clarify the intended use for these data, as this will influence how the data are presented and/or made available.
4. Empower and incentivize ECCs with modern tools by using dedicated shared services models and cloud-based services to improve consistency and quality of service.
- Move to cloud-based technology/shared service models for emergency response to lower the cost of change and encourage consolidation across jurisdictions, leveraging hybrid cloud/premise models to account for performance/connectivity issues.
  - Provide on-demand availability in disaster situations where the demand for seats is elastic.
  - Empower state 911 authorities to promote the sharing of ECC services, achieve economies of scale, and improve response times and lives saved.
  - Encourage small ECCs (74% of all ECCs employ three or fewer telecommunicators<sup>85</sup>) to leverage one another’s resources when migrating to next-generation technology (research, training, purchasing, and maintenance).

---

<sup>85</sup> Industry experts at the National Emergency Number Association provided this estimate during a Transform911 interview on April 11, 2022.

5. Develop an emergency services procurement hub: a unified and searchable website that helps emergency services professionals navigate the complex world of funding, technology, and operations related to emergency services.
  - Many valuable resources exist today but are not well known. There is a lack of clear, well-known, and actionable information: create a hub for all of the information that's already out there while making it more accessible and easily searchable with plain language and guides specific to industry and buying needs, request for proposal (RFP) templates and boilerplate starting points for the industry—and provide a clear focus on what specific standards are absolutely necessary and why. Some example resources include:
    - [USDS TechFAR Hub](#) provides basic principles and case studies for agile procurement processes.
    - [Evidence-Based Practices Resource Center](#) of the Substance Abuse and Mental Health Services Administration provides a programs and practices directory that could be used for industry professionals to share their most effective strategies and tactics with other jurisdictions in a more timely fashion.
    - The [Unified CAD Functional Requirements](#) of the Association of Public Safety Communication Officials (APCO) and Integrated Justice Information Systems (IJIS) Institute and the work of National Emergency Number Association (NENA).
    - Share boilerplate legislation, policy, and procurement tactics (piggyback contracts and national contract vehicles like HGACBuy and CoProcure).
  - Coordinate broadly, outside the industry, on best practices for modern procurement that fosters innovation and is responsive to the needs of the ECC workforce and the communities they serve, including lessons learned from [NASCIO](#) and [NASPO](#) in addition to those from NENA, APCO, [USDS TechFAR Hub](#), and [Procurement Innovation Resources from the IJIS Institute](#).
    - Work to bring vendors to the table as well.
  - Develop specific examples of common language to be included in any emergency-response-related RFP.
    - Standardizing RFP/contractual language around data ownership and immediacy of access for reporting purposes is essential to ensuring efficient operations of ECCs. Transform911 recommends the widespread consideration, adaptation where/when necessary, and adoption of the following California Governor's Office of Emergency Services standards:<sup>86</sup>
      - All 911 traffic data shall be the property of the ECC/PSAP. All meta-data shall be the property of the state 911 authority. All 911 traffic data and meta-data shall not be accessed or distributed by any contractor or any of its subcontractors.
      - All 911 call data records are the property of the state 911 authority and shall be made available to the ECC/PSAP and stored in the system for a minimum of one year, with the ability for the ECC/PSAP to download the data for local storage. The contractor shall utilize Session Internet Protocol (SIP) metadata and i3<sup>87</sup> logging to monitor,

<sup>86</sup> As shared by current National Association of State 911 Administrators Board President and California Governor's Office Emergency Services 9-1-1 Branch Manager, Budge Carrier.

<sup>87</sup> "i3" refers to the NG911 system architecture defined by NENA, which standardizes the structure and design of Functional Elements making up the set of software services, databases, network elements and interfaces needed to process multi-media emergency calls and data for NG9-1-1. More information can be accessed at [https://www.nena.org/page/i3\\_Stage3](https://www.nena.org/page/i3_Stage3).


track, and verify data flow as a part of the call data records. All NG 911 metadata shall have a 10-year retention period.

- All 911 Traffic Data, all CAD data, and all data sharing data authorized to be shared by the ECC/PSAP as part of this service is the property of the ECC/PSAP and shall be retained in the system for a minimum of one year, with the ability for the ECC/PSAP to download the data for local storage.
  - Volume-based pricing provides fewer challenges to training, maintenance, and redundancy for ECC operations than per-seat licensing.
  - Encourage public sharing of 911 call data for transparency and research purposes.
6. Collect data to understand what the response should be.
    - Understand that particular places, as well as particular groups of people, have particular needs. To that end, collect and analyze data on a geographic level, and make sure marginalized groups are given attention in the data.
    - Embed the costs of data analysis in funding structures, in recognition that small agencies may not have the resources to collect or analyze data themselves.
    - Acknowledge the limits of quantitative data and accept that it will not be feasible to study everything before implementing solutions.
    - Highlight stories and qualitative data to craft compelling narratives and use quantitative data to support.
  7. Require ECCs to offer all advanced services including text-to-911<sup>88</sup> and have the ability to receive enhanced location data multimedia in compliance with the i3 standards (particularly for people with disabilities and people for whom English is not a first language).
    - The public expectation of what services are available in our nation's ECCs has greatly outpaced reality. ECCs that have upgraded the infrastructure and now offer true NG911<sup>89</sup> services enjoy a more secure, redundant, flexible, and accessible system.
    - The time has come to standardize the 911 experience across the nation. With cybersecurity being a top priority for ECCs and government entities, federal and state legislatures should pass laws and assign financial resources for all ECCs to elevate to this more secure and complete level of service.
  8. Develop a credentialing process for technology vendors to apply and demonstrate compliance with all industry American National Standards Institute (ANSI) standards.
    - The two largest emergency communication industry associations<sup>90</sup> have coordinated the creation of much-needed standards that have been vetted and certified by the ANSI. The standards address many topics: training, hiring, operations, and technology. Vendors often state "Meets ANSI Standards" in their marketing materials. It is recommended that the associations create a collaborative credentialing process to ensure that vendors are making accurate statements in regard to their standards compliance.

<sup>88</sup> Teletypewriter (TTY), real-time-text, multimedia text (including voice, video, data).

<sup>89</sup> NG911 refers to a nationwide initiative to upgrade 911 from analog phone systems to Internet Protocol (IP)-based systems that are capable of handling text and multimedia messages.

<sup>90</sup> [Association of Public Safety Communication Officials \(APCO\)](#) and [National Emergency Number Association \(NENA\)](#).



## Chapter Nine: Securing National-Level Support (for 911)

*Effective, equitable emergency response locally requires unequivocal support federally.*

**What are we calling for?** We are calling for federal, executive branch leadership to embrace and advance the transformative changes outlined in these recommendations. Specifically, we are calling for the president to create a time-limited 911 center and directorship by December 31, 2022, along with a federal interagency taskforce—to also include the relevant federal agencies, as well as local 911 and other related field leaders—and a National Academy of Sciences (NAS) panel. The emphasis on time limitation is made because a permanent federal home for this center should be carefully examined and ultimately recommended by the NAS panel to establish where it can best be located to serve the needs of callers and the workforce; to coordinate complex processes among the many federal, state, and local partners; bolster federal support; and weather political leadership changes. There are many considerations for 911’s long-term success that will need to be carefully considered before this center should be established.

While we strongly believe that federal leadership and guidance are critical for the transformation of 911, we emphasize that we are *not* calling for the federalization of the 911 emergency response system. Provision of services and authority to deploy them so should remain at the local, regional, or state level. We are calling for federal guidance and resources to support local leadership (see chapter nine on national support), to promote more direct connections to the community (see chapter four on the people), and to make a significant financial investment in this long-overlooked aspect of the emergency response system.

### **Why is this essential?**

Our nation’s 911 system currently functions through a patchwork of thousands of locally operated ECCs, with oversight and support split across many different federal, state, and local agencies. Local control and relevance are essential (see chapter six on independent and equal 911). But without national minimum standards to align operational procedures and ensure communication and coordination among jurisdictions, the possibility of transformation on a national scale is reduced. For example, depending on the jurisdiction, 911 emergency calls may be handled by staff who are highly trained in a variety of emergency responses or by staff who have not even been trained to help a caller administer cardiopulmonary resuscitation or who lacks access to certified language translation services. This inequity in system responses almost universally disadvantages those in small, poor, or otherwise marginalized communities, and it undermines public safety and public health.

The federal government is uniquely suited to convene stakeholders to build constituency, tap expertise, and set minimum standards for training, data, and technology. Without federal involvement, standards are not only optional; they are largely unfunded. Federal incentives, coordination, adherence monitoring, and resourcing has the power to galvanize the adoption of innovative practices and technology across geographical and operational lines—from our most rural communities to the densest urban centers.

We strongly support local control over ECCs and the 911 ecosystem. Local policymakers, ECC leadership, and 911 professionals are best positioned to know and be responsive to the local context and



preferences. However, federal support and leadership can nonetheless be transformative for local systems.

This is true whether or not federal resources constitute the majority of the system's expenditures. Consider, for example, the federal role in social welfare versus education systems. With respect to social welfare spending, the federal government outspends state and local governments by [nearly double](#). In contrast, federal spending on education accounts for only approximately [8 percent](#) of total education spending. Nonetheless, in both social welfare and education, federal leadership is crucial.

We emphasize that we are not calling for the federalization of 911. Rather, we are calling for the executive branch of the federal government to help advance the recommendations contained in this blueprint.

A federally created, time-limited 911 directorship, 911 center, and interagency taskforce is necessary to

- establish the permanent consolidated placement of 911 within the federal governance ecosystem by December 31, 2024;
- help streamline local 911 operations;
- evaluate and implement standards, best and promising practices, and emerging technologies (see chapter eight on data and tech);
- ensure coordination, consistency, and interoperability—as appropriate—between 911 and crisis and non-emergency hotlines;
- implement a national 911 data collection effort;
- offer accountability and establish a baseline of care for callers and professionals, regardless of location in the country;
- increase coordination among ECCs and encourage shared infrastructure and/or consolidation, wherever feasible;
- secure revenue, including preventing states from reappropriating 911 fees collected to other purposes; and
- incentivize continuous improvement and evolution.

Importantly, these time-limited federal structures are meant to start moving the needle on transformative change to our nation's 911 system relatively quickly. They are designed to be time-limited so that they can eventually hand off responsibility for 911 coordination to the NAS panel, which will, in turn, consider a more permanent home for 911 on a longer-term basis.

Current challenges include a lack of common minimum standards for (1) workforce training and support, (2) data collection and reporting, and (3) technology interoperability. This means that while the emergency number people call is constant, the response's appropriateness is highly variable. The federal government is uniquely positioned to address these challenges by setting minimum standards while incentivizing application of these standards and galvanizing durable change across geographical and operational lines. Federal funding and leadership can help shepherd local efforts so that variance between local ECCs is minimized.

Emergency services governance takes place at all levels of government—federal, state, regional, county, and city—and these roles sometimes overlap based on geography and type of emergency service or issue. Partnerships across all levels of government and discipline are required, as is a high degree of planning and sufficient dedication of resources.

## TRANSFORM<sup>911</sup>

At the federal level, 911 governance is shared among the following entities:

- the Federal Communications Commission’s Public Safety and Homeland Security Bureau, which governs interoperability and accessibility issues surrounding 911;
- the National Telecommunications and Information Administration (NTIA), an executive-branch entity primarily focused on expanding broadband internet availability and access;
- the Department of Homeland Security Cybersecurity and Infrastructure Security Agency, which promotes 911 interoperability and cybersecurity and facilitates coordinated emergency communications in the event of threats, attacks, and natural emergencies; and
- the Department of Justice, which promotes equal access to 911 for people with disabilities through enforcement of the Americans with Disabilities Act.

In addition, the National 911 Program was established to provide federal leadership to coordinate among these federal agencies along with state and local 911 services. And in 2004, passage of the ENHANCE 911 Act prescribed the establishment of a national 911 Implementation Coordination Office (ICO). The ICO is charged with coordinating between the NTIA in the US Department of Commerce and the US Department of Transportation’s National Highway Traffic Safety Administration (NHTSA) on 911 issues.

### TRANSFORM<sup>911</sup> FEDERAL GOVERNANCE STRUCTURE

AT THE FEDERAL LEVEL, 911 GOVERNANCE IS SHARED AMONG THESE ENTITIES:



**the Federal Communications Commission’s (FCC) Public Safety and Homeland Security Bureau (PSHSB)**  
which governs interoperability and accessibility issues surrounding 911



**the National Telecommunications and Information Administration (NTIA)**  
an executive-branch entity primarily focused on expanding broadband internet availability and access



**the Department of Homeland Security’s Cybersecurity and Infrastructure Security Agency**  
which promotes 911 interoperability and cybersecurity and facilitates coordinated emergency communications in the event of threats, attacks, and natural emergencies



**the Department of Justice**  
which promotes equal access to 911 for people with disabilities through enforcement of the Americans with Disabilities Act (ADA)



In short, 911 governance is diffuse and confusing even among experts, and the action items in this chapter are designed in part to provide clarity and direction.

Funding at the federal level for investments in state and tribal 911 programs occurs primarily through the National 911 Program, which at the time of this writing is housed at NHTSA. Originally authorized in 2004 for a period of five years, the National 911 Program has been reauthorized multiple times but, without further action, is currently slated to sunset on October 1, 2022. Over the past 18 years, the program has focused on a wide variety of 911-related topics, including technological upgrades (e.g., NG911 and FirstNet), 911 cybersecurity, 911-related data, legislation, workforce training, and funding issues. However, even with this federal program, gaps exist in knowledge, coordination, commitment, and support for the nation's 911 system that must be addressed.

In addition to NHTSA/DOT, other federal departments and agencies like the Department of Justice and specifically its Bureau of Justice Assistance and the Department of Homeland Security's State Homeland Security Grant Program also provide grants for emergency communications, which may include allocations for 911 programming. While these grants offer flexibility to state and tribal governments to address their specific 911 programming priorities, annual awards are reported based on the total amount received for all preparedness and response needs.

Upon completing an exhaustive search on funding data and considering assessments from subject matter experts in emergency preparedness, we have concluded that sufficient data do not currently exist to reliably measure the impact of federal expenditures for state, tribal, and local 911 initiatives, including support of NG911 infrastructure. This recommendation directly seeks to remediate this challenge, among other priorities.

A comprehensive assessment of federal investments in 911 and related infrastructure is essential to assess the multiple current and historical efforts. In 2019, for example, federal allocations for activities and enhancements to existing 911 programs exceeded \$100 million. However, while allocations likely have been awarded in previous years, these data are not readily available. Moreover, in another example, in 2015, the US Department of Homeland Security, Science and Technology Directorate, entered into an agreement with a group of organizations led by a public-safety-focused nonprofit organization in the amount of \$1,289,950 to study text-to-911 translation, in order to address the burgeoning need to ensure that people requesting emergency assistance who are not primary English speakers can smoothly access critical response.

### **Actions:**

1. Establish a short-term high-level federal executive branch leadership position and cabinet-level interagency taskforce to drive nationwide 911 transformation.
  - By December 31, 2022, launch a cabinet-level interagency federal taskforce—analogueous to the [Federal Interagency Reentry Council](#)—that can align funding (including making the case for the increased funding outlined below and linking it to meeting standards), messaging, public outreach, hiring practices/restrictions, and the technology taskforce recommendations outlined in chapter eight on data and tech, and launch data collection efforts for the 911 system, as well as provide coordination support between 911 initiatives and other emergency response efforts such as 988 rollout.
    - Have membership from senior officials within every federal agency reflected in 911 and 988 operations at the time of this writing, as well as local 911 and other related field leaders.
  - Create a non-confirmed, high-level federal position, such as a national 911 director or similar position, to lead this interagency taskforce.

2. Charge the taskforce with addressing issues related to the workforce pipeline challenges described in chapter nine on workforce:
  - Review hiring exclusions by June 30, 2023, and issue a federal fact sheet detailing mandatory and optional disqualifying criteria.
3. Develop baseline minimum credentialing and training standards. Charge the taskforce with instilling a process that will ensure immediate and continuous data collection and learning. By June 30, 2023, the taskforce should establish a process to consolidate and issue its first report on 911 to provide basic statistics.
  - Several organizations have taken steps to enumerate recommended minimum training standards and training topics for 911 professionals, including [APCO](#), [NENA](#), the [Denise Amber Lee Foundation](#), and others. We are not recommending any particular set of existing standards; rather, we are recommending that the taskforce appoint experts to determine the requisite standards.
  - Address the reality that comprehensive data on 911 is currently lacking, due to the fact that there is no publicly available national data collection pertaining to 911.<sup>91</sup> Because one of the most important things the federal government must do immediately is enable a basic understanding of the 911 system through access to available data:
    - Inventory the currently federally collected data relevant to 911.
    - Recommend new data collection requirements and performance standards.
    - Create a national scorecard system to encourage learning across jurisdictions that will serve as the basis for an expanded version, as determined by the NAS panel (described below).
  - Coordinate immediately with the Federal Communications Commission to obtain, organize, and consolidate data with and from the national telecom vendors to produce and document the data they currently have available.
    - Immediately collect available data from ECCs, considering what is easily accessible as well as what additional information could be gathered from the Federal Communications Commission's [Public Safety Answering Point \(PSAP\), or ECC, registry](#) and related data collection efforts. Also consider opportunities to expand this data collection, its costs, and any limitations. In particular, it is important to understand ECC governance structures, personnel size, call volume, response options, resource allocations, and training and hiring requirements, among other factors that define each ECC.
    - Update and continue to maintain [the GeoPlatform ArcGIS PSAP 911 Service Area Boundaries map](#). This map is a helpful tool, but it sits outside the federal government's infrastructure and does not appear to be regularly updated. This resource should be maintained regularly, federally, and updated at least annually. It should also be in an environment where users with a variety of skills and interests can easily add and remove other elements (e.g., city/county/census tract boundaries and related statistics).

---

<sup>91</sup> The field benefits tremendously from estimates that NENA provides, which are some of the only data we have on 911. Yet many of the statistics they publish—e.g., that 240 million calls are made to 911 each year—have gone unchanged for years and do not offer the methodology by which the estimates have been generated. As the research agenda (described in the next chapter) articulates, it is absolutely essential that we have a national understanding of how many calls are made to 911, for what, where, how/if they are responded to, and what the associated outcomes are. While current telecom data may not answer all of these questions, it certainly can start to paint a picture.

4. Institute the 911 data and technology ethics component of the federal taskforce (see chapter eight on data and tech) and oversee its charge, including the creation of guidelines for data capture, ownership, sharing, and analysis.
  - Appoint cross-sector, multilevel stakeholders including impacted communities, state and local policymakers, 911 administrators and telecommunicators, technology vendors, technologists, first responders, and behavioral health specialists.
  - Concretize the taskforce's charge in regard to the scope of the work to develop clear, plain-language explanations on the use of emergency response data including a description and purpose of any software algorithms, the data used, mechanisms for human oversight, and any risk-mitigation techniques.
5. Ensure equitable funding for ongoing 911 operations.
  - Reduce or eliminate the practice of states' reappropriating 911 revenues to fund other unrelated activities (which leaves ECCs under-resourced and unable to provide the care that communities need and expect). Instead, tie federal 911 funding to compliance.
    - To ensure adequate and equitable funding, the taskforce should evaluate the prevalence of this issue<sup>92</sup> and recommend tactics to cease its practice, whether that be in the form of an executive order, agency directive, or act of Congress.
  - Consolidate existing funding streams to create a formula grant program to states and localities for annual operating support.
  - Increase the affordability and effectiveness of 911 for the people who pay for it.
    - With the vast majority of 911 communications increasingly coming from mobile devices, fees being generated by billing location are likely not the same place as where 911 calls (or associated ECC) are initiated. For a variety of reasons, the 911 service consumers pay for is likely not the 911 service a caller has access to when reaching out to 911.
6. Establish and launch a NAS panel by December 31, 2022, to consider and provide final recommendations by March 31, 2024. Since it is expected that the NAS panel will take time to inaugurate, the short-term federal interagency taskforce is designed to commence more swiftly, after which the panel will step in regarding the establishment of the following:
  - The final and permanent placement of 911 within the federal government.
    - Ensure permanent home for a 911 center that conducts regular review and updates of workforce training, credentialing, and staffing standards.
    - Determine the time frame and review template for this work.
  - A set of national consistent standards, including baselines for:
    - Establishing national and state-level minimum standards for how ECCs operate to ensure consistent, equitable access and delivery of 911 services and related certified response options (e.g., certified language translation and standards for training in cardiopulmonary resuscitation), regardless of location in the country.
      - These standards should be crafted in such a way as to provide for the differences between operating systems in different contexts (e.g., urban versus rural locations).
      - Standards should include call-taking and dispatching procedures, protocols, practices, data collection, and key performance indicators.
        - They should be developed in close collaboration with industry leaders such as the Association of Public-Safety Communications Officials (APCO), National Association of State

<sup>92</sup> The FCC's reports on fee collection and appropriation are a helpful data point: [www.fcc.gov/general/911-fee-reports](https://www.fcc.gov/general/911-fee-reports).



911 Administrators (NASNA), and the National Emergency Number Association (NENA), which have independently developed robust standards for call-taking and dispatching procedures, as well as workforce training to resolve differences and adopt a set of minimum standards and certifications for use across the industry and country.

- Articulating successful minimum standards so that call answering time is not equated, in and of itself, with quality.
  - Study and articulate cost-benefit analysis. Sustainable care (for an individual or a community) will be cheaper in the long run than repeated crisis interventions.
  - Build resource-pooling, shared economies, and/or or cost-sharing structures for smaller communities that cannot independently support the solutions they need.
  - Consider the other resources that non-police response units will need.
  - Evaluate whether responders will be able to get to an emergency fast enough from wherever they are based. Strategize around location, deployable assets, and other factors.
- If ECCs are not able to meet these minimum standards, they should consider consolidating and/or sharing resources with another ECC to bring them into compliance.
- A streamlined federal accountability and oversight program, modeled after the consent decree and pattern and practice investigations led by the Department of Justice that provide opportunity for thorough investigation and collaborative and/or sanctioned reform practices that are closely and regularly monitored and assessed.
- Address the many questions around 911 revenues and associated demands for service (see action item 5, above) and offer potential remedies given that the vast majority of 911 communications are increasingly originating from mobile devices, yet user fees are largely being generated by telephone billing location, which in many instances may not be the same place as where 911 calls (or associated ECC) are initiated.
- Require ECCs to offer all advanced services to include text-to-911<sup>93</sup> and have the ability to receive enhanced multimedia and location data in compliance with the i3 standards<sup>94</sup> (particularly for people with disabilities and people for whom English is not a first language).
- As noted in recommendation six (chapter eight on data and tech), the public expectation of what services are available in our nation's 911 centers has greatly outpaced reality. ECCs that have upgraded the infrastructure and now offer true NG911 services enjoy a more secure, redundant, flexible, and accessible system, and the time has come to standardize this experience across the nation. With cybersecurity being a top priority for communication centers and government entities, the NAS panel should advise on (a) how federal and state legislatures may pass laws and/or executive orders and (b) how to assign financial resources for all ECCs to elevate to this more secure and complete level of service.

<sup>93</sup> TTY, real-time-text, multimedia text (including voice, video, data).

<sup>94</sup> NENA's family of NG911 standards—with i3 serving as the keystone—enables data-rich, secure, IP-based communications from the public, through 911, to every field responder. The new version will serve as the foundation of a twenty-first-century, broadband-based 911 ecosystem. From: <https://www.nena.org/news/572966/NENA-Releases-New-Version-of-the-i3-Standard-for-Next-Generation-9-1-1.htm>.

- Develop a credentialing process for technology vendors to apply and demonstrate compliance with all industry American National Standards Institute (ANSI) standards. The two largest emergency communication industry associations have coordinated the creation of much-needed standards that have been vetted and certified by ANSI. The standards address many topics to include training, hiring, operations, and technology. Vendors often state “Meets ANSI Standards” in their marketing materials. It is recommended that the associations create a collaborative credentialing process to ensure the vendors are making true statements in regard to their standards compliance.
- 7. Incentivize transformation by creating a federal grant program to be run through the NAS panel’s to-be-determined location for federal 911 placement. This grant program should include:
  - A one-time capital and data infrastructure upgrade, allowing states to keep a portion of these grants for administration, of \$300 million to help enhance security and connectivity among federal, state, and local emergency management centers. These upgrades will also facilitate greater adoption and practice for ECCs to access data and follow standards.
    - We recommend that funding be conditional on enacting and adhering to the standards and data linkages that will be recommended by the NAS panel.
  - Up to five years in funding for operational transformation to help support personnel and related costs (see chapter five on workforce) associated with:
    - Including \$350 million to support recurring salary upgrade needs, inclusive of state and local matching funds. This will help significantly offset up-front costs resulting from 911 professional title reclassification.
      - We recommend that localities and states meet 25% of the 75% in matching funds, that will gradually be reduced every year for the five years of this investment.
    - Providing a \$150 million boost for the current workforce to meet new standards through training and other measures, including:
      - Implementing workforce traumatic stress reduction practices, to provide greater levels of support for this growing and hurting workforce facing unsustainable mandatory overtime, high vacancy rates, burnout, and other factors compounding the stress that results from handling 911 calls.
      - Developing and implementing 911 community boards.
      - Supporting the development of a complete first responder ecosystem workforce to include on-scene, virtual, and hotline professionals.
      - State college tuition, loan forgiveness, and access to Pell Grants to be made available for the entire first responder ecosystem workforce—including 911 professionals, hotline professionals, and on-scene and virtual responders.
- 8. Tie federal funding to compliance with criteria to include that states and localities receiving grants have
  - 911 state directors who meet some baseline standards to be set by the federal taskforce.
  - 911 governance boards that meet criteria set by the federal taskforce and are inclusive of multiple community perspectives.

- met interoperability, data, community, and transparency standards such as those suggested in this blueprint.
- a state 911 procurement officer with credentials established by the taskforce and NAS panel to review and approve technology upgrades, with an eye toward shared technology resources that will save money and increase redundancies in the event an ECC goes offline or is overwhelmed by call volume.
- followed and accessed as needed federal support in procurement, which could be a meaningful lever of change allowing states and localities to enter into group bargaining and procurement that could help control costs and level the playing field for ECCs.
- obligatory agreements to share call data with the public.

Federal support on research for these essential inquiries will be critical. Please see the full research agenda in chapter nine and Appendices F and G.



## Chapter Ten: Research Agenda

We have outlined our recommendations for a transformed 911 above, and we need an evidence base to ensure that these recommendations are on solid footing to be implemented and scaled. We recognize that research on 911 to date has been scant, and thus our recommendations are not all based on strong empirical evidence. We have considered evidenced-based practices whenever possible. Where empirical evidence has been lacking, we have considered practiced-based evidence. Some recommendations are explicit calls for research or data sharing, while others lend themselves to evaluation. As a result, we recommend that research be implemented in tandem, both to improve knowledge of the field generally and to evaluate the impacts of our recommendations. This is an exciting opportunity to be at the forefront of building an evidence base for an important, growing field.

The first order of this research agenda is to contribute to understanding the current state of 911, which is essential to assessing how best to implement our recommendations. We also see the implementation of these recommendations as an opportunity to gather information and evaluate their impacts, thus allowing for large-scale uptake and future evidence-based decision-making. Unless specified as national, all research outlined below should be tested in different size jurisdictions to improve generalizability.

### Essential Research

*Questions and avenues of inquiry that our research delegates deem critical to progress in the 911 field.*

- How many people are calling 911, and what are they calling about? There is a need for comprehensive national estimates to answer this question and inform all subsequent research questions.
- What do we know about the implementation of new call-coding standards and the degree to which they are followed with fidelity?
- What is the prevalence and impact of bias by proxy, passed from caller to call taker to responding officer, and how does it inform officer action?
- Where are the alternative strategies proposed by our recommendations currently being implemented? Evaluate those pilots and programs in sites that vary in size and demographics to improve cross-contextual understanding.
- Conduct surveys of 911 professionals to understand challenges and develop new career progression and retention strategies.
- Develop a living system for digesting data in a standardized way for later AI analysis.

### Evaluations to Conduct Concurrently with the Recommendations

*Conduct the following evaluations while the recommendations are being implemented to contribute to the evidence base. For detailed research questions and methodologies that correspond with individual recommendations, see Appendix G.*

*Evaluate the introduction of:*

- Alternative first response models
- Hotlines
- 911 professional recruitment and retention methods

- Governance models
- Coordination of emergency communication centers
- Next Generation 911
- National or statewide standards

Evaluations should consider:

- Accessibility
- Budget impact
- Impact on service delivery
- Impact on harm reduction
- Impact on 911 professional staff
- Variations across program model
- Variations across community





## **Transform911: A Blueprint for Change: Appendices**

**A: Transform911 Glossary**

**B: Transform911 Workgroup Co-Chairs and Members**

**C: Transform911 Baseline Survey and Findings Report**

**D: Transform911 Draft Recommendations by Workgroup for Public Comment**

**E: Transform911 Draft Recommendations Public Comment Analyses**

**F: Transform911 Workgroup Recommendation Crosswalk**

**G: Transform911 Operationalizing and Evaluating the Recommendations**

**H: Transform911 Research Questions for Inquiry and Action**

## Appendix A: Glossary of Terms

### 211

A toll-free number for information about health and human services to meet basic needs such as housing, food, transportation, and health care. 211, a service coordinated by the United Way, is available in every state, although not every community may have access to it.

### 311

A toll-free non-emergency municipal services number used in jurisdictions throughout the U.S., although some cities have other seven-digit numbers that provide similar services. 311 is intended for non-emergency services provided by city or public safety authorities, such as animal control, building violations, environmental concerns, street maintenance, and filing a non-emergency police report.

### 511

A toll-free number used in several states to provide travelers with real-time weather and traffic information.

### 911

The universal toll-free emergency services number for the United States and most of North America. 911 was first implemented in 1968 in Haleyville, Alabama, and is now available to most US residents, although some rural areas lack access.

### 911 Hotline Alternatives

911 is the national emergency number for the U.S., but there are other numbers to call (and text) for different kinds of help. These “hotlines” include medical, social service, civic, and community alternatives to calling 911 for assistance, including 311, 211, and a variety of mental health and crisis hotlines.

### 911 Professionals

The people who serve as operators, call takers, call-handlers, dispatchers, and other roles in emergency communications centers, which are the first point of access to response in an emergency.

### 988

The national number associated with mental-health, veterans, and suicide helplines. 988, operational effective July 16, 2022, connects callers to the National Suicide Prevention Lifeline and enables veterans seeking service to dial “1” for access to the national Veterans Crisis Line.

### Alternative Responders

Generally, anyone other than police, firefighters, or Emergency Medical Service (EMS) personnel who responds to a 911 or alternative hotline call. Alternative responders may be trained mental health and substance use treatment providers, social workers, peers, community health workers, or other workers. Mental health and substance use calls are perhaps most often mentioned in this area, but other situations that may benefit from alternative response include animal control, domestic violence, traffic violations, and noise complaints.

### Association of Public Safety Communicators (APCO)



Founded in 1935, APCO International represents the interests of public safety communications professionals.

#### Basic 911

The original 911 system for which the emergency and its location are communicated to a 911 professional by voice or teletype, using the public switched telephone network (PSTN).

#### Behavioral Health

Refers to the connection between mental health and behaviors that affect both mental and physical health, such as substance use disorder.

#### Computer-Aided Dispatch (CAD)

A computer-based system that aids 911 professionals by automating selected dispatching and record keeping activities. CAD helps 911 professionals prioritize and record incident calls, coordinate incoming data from multiple streams, manage or automate dispatch and monitoring of field responders, and facilitate quality assurance and performance measurement activities.

#### Calls for Service

Calls to 911 from community members.

#### Call Taker, or Call Handler

The professional who answers calls to 911 or an alternative hotline and determines what type of response is needed.

#### Call-taker Protocols

Scripts, decision trees, guide cards, and other tools and policies that guide how 911 professionals answer and triage calls.

#### Call Type

The reason for the 911 call for service, which can range from minor issues like traffic or auto accidents to more serious crimes like burglaries or assault. Call type is influenced by how the call taker interprets and classifies the call, as well as the array of classification options available to them.

#### Call Volume

The number of calls placed to an emergency communications center.

#### Crisis Intervention Team (CIT)

A group of police officers who have received specialized training to interact with people experiencing mental or behavioral health crises to avoid use of force and to connect people with services or treatment, rather than involvement with the criminal legal system. CIT-trained officers often receive collaborative support from mental health professionals and community members. CIT is sometimes used to refer only to the crisis intervention training that police officers receive.

#### Civilian Response Team

A team comprised of non-law enforcement professionals with expertise in any of the following: mental health, behavioral health, substance use disorders, social work, mobile crisis intervention, community

resources for conflict resolution and crisis response, peer-support, public health, and any others who can deflect or divert people from police enforcement and correctional confinement.

## Co-Responders or Co-Response

Co-response is a model of emergency response in which mental health and substance use professionals or other social services personnel (co-responders) respond to 911 calls for service along with police officers or soon after police arrive at the scene.

## Dispatcher

The ECC professional who receives information from a 911 call taker (or in smaller ECCs may also serve as call taker) and then dispatches emergency responders, which are usually firefighters, EMS personnel, and/or police.

## Emergency Communications Center (ECC)

The preferred term (in lieu of Public Safety Answering Point) of many 911 professionals for the entity that is designated to receive and respond to requests for emergency assistance.

## Emergency Medical Technician/Emergency Medical Services (EMT/EMS)

Medical personnel who respond to medical emergency 911 calls. The term EMS is often used to refer to personnel that respond in ambulances.

## Enhanced 911

A 911 system with location-tracking capabilities that enables the visual display a caller's phone number and address to the call taker.

## Federal Communications Commission (FCC)

The U.S. government agency that serves as the lead authority for communications law, regulation, and technological innovation. The FCC regulates interstate and international communications, including 911, in all 50 states, the District of Columbia and U.S. territories.

## FIRSTNET

A nationwide public safety cellular network to promote communications among first responders and those who support them.

## Governance

In the context of 911, governance pertains to the authorities—including federal, state, county, and municipal governments, police jurisdictions, and for-profit companies—contracted by a municipality, that put forth statutes, policies, protocols, and accountability mechanisms to promote effective and efficient emergency communications and response, including service reliability, interoperability, and cyber security.

## Hispanic American Police Command Officers Association (HAPCOA)

A national association representing Hispanic-American command officers from law enforcement and criminal justice agencies at the municipal, county, state, and federal levels.

## Industry Council for Emergency Response Technologies (iCERT)

An association representing vendors of public safety and emergency response technologies.

## Internet of Things (IoT)

The interconnection via the internet of physical objects—"things"—that are embedded with sensors, software, and other capabilities, enabling them to send and receive data and potentially communicate with each other.

## Interoperability

The capability for disparate systems to communicate with one another.

## Key Performance Indicators (KPIs)

Quantifiable metrics that are (or could be) used to define and measure success and failure within emergency response.

## Landline

A colloquial term for the Public Switched Telephone Network access via an actual copper or fiber optic transmission line that travels underground or on telephone poles. Used to differentiate traditional telephonic communication from the "wireless" connectivity of a cellular or Internet-based device.

## Land Mobile Radio System (LMRS)

A wireless communications system that uses portable and mobile devices to allow for two-way digital radio communications.

## Long-Term Evolution (LTE)

The emergent technological network that allows for increased capacity and for large volumes of data to be exchanged over wireless networks.

## National Suicide Prevention Lifeline (LIFELINE)

A national network of local crisis centers that provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. Effective July 16, 2022, LIFELINE will be accessible nationwide by dialing 988.

## Low-Level Crimes

Generally considered to be minor offenses that do not involve the physical harm of another person, including misdemeanors, petty crimes, and crimes of survival.

## National Association of State 911 Administrators (NASNA)

An association of state 911 program administrators whose focus is to facilitate the success of 911 programming at the state, territory, and district level.

## National Emergency Number Association (NENA)

An association established to improve 911 through research, standards development, training, education, outreach, and advocacy.

## Next Generation 911 (NG911)

A digital or Internet Protocol (IP)-based 911 system that is currently being implemented across the U.S. to promote interoperability among emergency systems; enable 911 to be more reliable and responsive





to widespread emergencies, natural disasters, and call overload; and to provide an avenue for the receipt of videos, photos, and text messages shared by 911 users.

#### National Highway Traffic Safety Administration (NHTSA)

A federal agency within the Department of Transportation whose mission is to promote transportation safety in the United States.

#### National Organization of Black Law Enforcement Executives (NOBLE)

An international association representing represent Black chief executive officers and command-level law enforcement officials from federal, state, county, municipal law enforcement agencies, and criminal justice practitioners.

#### On-Scene Response

Policies, practices, and analyses related to 911 and alternative hotline response tactics by police, EMS, fire, and alternative responders who are dispatched to the scene.

#### Public Safety Answering Point (PSAP)

The technical name for a 911 call center, also known as an Emergency Communications Center (ECC). Each PSAP represents a district or geographic area, such as a county, city, region, or independently bounded area. The preferred term is Emergency Communications Center.

#### Public Safety Telecommunicator (PST)

A term referring to 911 call takers, who answer 911 calls, and 911 dispatchers, who receive information from call takers and then deploy responders to the scene of an event. The preferred term is 911 Professional.

#### Smart911

A for-profit platform that enables voluntary users to enter information about themselves and other members of their household, including pets, into the platform to be stored for retrieval by ECCs.

#### Teletypewriter Devices for the Deaf (TTY)

The technology designed to enable non-hearing individuals to communicate by text via a telephone landline.

#### Voice over Internet Protocol (VoIP)

Internet Protocol (IP)-based systems that rely on broadband internet rather than the public switched telephone network (PSTN) and have the ability to transmit multimedia messages in addition to voice calls. This is the major component of NG911.

#### Use of Force

Police officer use of physical means to compel compliance, including officer-involved shooting, taser use, and use of restraints.

## Appendix B: Workgroup Membership

### 911 Professional Career and Supports

#### Co-Chairs

**George Rice**, *Managing Partner, SkyHawk Global*

George Rice is a Managing Partner at Skyhawk Global Associates. He has a diverse background covering 35 years in public service and global engagement. He is a former American enforcement and intelligence agent and has headed a series of programs and organizations directed at public sector and emergency services efforts, with a focus on the technologies that enhance these vital interests. He is the former Executive Director of the Association of Public-Safety Communications Officials (APCO) International and the Industry Council for Emergency Response Technologies (iCERT), leading both organizations into significant growth periods.

**Lora Ueland**, *Executive Director, Valley Communications Center 911*

Lora Ueland is the Executive Director of Valley Communications Center 911 in Washington State. She began her career as a dispatcher at Valley Com and has held multiple roles, culminating in her current position as Executive Director since 2011. Lora is the immediate past-president of the Washington APCO/NENA Chapter, Board Chair of the Puget Sound Emergency Radio Network, and Board member of the Community Connectivity Consortium, a fiber-optic network serving cities, schools, hospitals and 911 Centers in the greater Puget Sound region. With nearly 40 years' experience in the 911 field, Lora has earned APCO certifications as a Registered Public-Safety Leader and Certified Public-Safety Executive. Continual improvement, growth mind-set and being of service are part of Lora's core values.

#### Members

**Jill Baldassano**, *Senior Manager, SkyHawk Global*

Jill is Senior Manager at SkyHawk Global where she develops strategic and integrated content to help clients advance overall business objectives. In her diverse background, she has helped companies from small startups to multi-billion-dollar global organizations develop their own brand and increase share of voice in their own unique way. Jill has expertise in helping transform companies through customer service content, digital strategies, user engagement campaigns and overall marketing communications. She has spent her career collaborating with subject matter experts, thought leaders, stakeholders and ultimately, the audience, to engage in meaningful content. Jill holds a bachelor's degree in English Literature from Brigham Young University.

**Jeremy Hill**, *911 Center Co-Manager, Amarillo, TX*

Captain Jeremy Hill currently serves as Co-Manager of the consolidated 911 center in Amarillo, TX. He has served in a First Responder capacity since 1999, where he performed duties in the communications center as a Dispatcher and Call Taker. Captain Hill also leads the Critical Incident Stress Management team at his 911 center and at the regional level. He cites employee health and wellness as core values to be championed.

**Yolanda L. Lewis**, *Executive Vice President, Justice and Health, Meadows Mental Health Policy Institute*

Yolanda is the Executive Vice President of Justice and Health for the Meadows Institute, focused on improving outcomes for individuals with behavioral health conditions in the criminal justice system. Before joining Meadows, she served as the Senior Director for Safety and Justice at The Pew Charitable Trusts, overseeing work to improve justice-related efficiencies at the state and local levels of government. Formerly the District Court Administrator for the Atlanta Judicial Circuit, Lewis designed initiatives in judicial administration, court and jail management, mental health, and justice reinvestment. A certified court manager, Lewis is an appointee to the Racial Equity Advisory Board for the District Court of Columbia, and a board member of the Institute for the Advancement of the American Legal System. She has served as faculty for Michigan State University's Judicial Administration program, vice president of the National Association for Court Management, a founding member of the Fulton County Smart Justice Advisory Council, and president of the Georgia Council of Court Administrators. Lewis holds a bachelor's degree in criminal justice, and a master's in public administration from the University of South Alabama and is a graduate of the executive leadership program at Yale University.

**Monica Million**, *9-1-1 Business Development Manager, Amazon Web Services*

Monica Million began working in 2001 as a telecommunicator at the Grand Junction Regional Communication Center in Colorado. Well respected within the industry, she advanced to serve as the president of NENA, the National Emergency Number Association. With 20 years of service, Monica currently works in the role of 9-1-1 Business Development Manager for Amazon Web Services.

**Keris Myrick**, *Director at JED Foundation/Co-Director S2i (The Mental Health Strategic Impact Initiative)*  
Co-Director of The Mental Health Strategic Impact Initiative (S2i) which aims to advance the transformation of mental health by catalyzing cross-sectional reforms, strengthening collaborations, and bridging gaps, she serves on the Board of the National Association of Peer Specialists (N.A.P.S.) is a Certified Personal Medicine Coach and Therapeutic Game Master. Keris previously held positions as the Chief, Peer and Allied Health Professions for the Los Angeles County Department of Mental Health, the Director of the Office of Consumer Affairs for the Center for Mental Health Services (CMHS) of the United States Health and Human Services' Substance Abuse and Mental Health Services Administration (SAMHSA), President and CEO of Project Return Peer Support Network, a Los Angeles-based, peer-run nonprofit and the Board President of the National Alliance on Mental Illness (NAMI). Keris is a leading mental health advocate and executive, known for her innovative and inclusive approach to mental health reform and the public disclosure of her personal story. Ms. Myrick has over 15 years of experience in mental health services innovations, transformation, and peer workforce development. In June 2021, Keris was the recipient of Mental Health America's highest honor, the Clifford W. Beers Award. Ms. Myrick has a Master of Science degree in organizational psychology from the California School of Professional Psychology of Alliant International University. Her Master of Business Administration degree is from Case Western University's Weatherhead School of Management.

**Bob Patterson**, *Executive Director, Mercy EMS Springfield Communities*

**Tiffany Russell**, *Project Director, Mental Health and Justice Partnerships, The Pew Charitable Trusts*

Tiffany Russell directs Pew's mental health and justice work with a focus on improving justice-related efficiencies in state and local governments. This includes developing national standards for reforms that reduce the use of law enforcement and jails when responding to individuals with a mental health issue. Before joining Pew, Russell served as the director of planning and development for the Superior Court of Fulton County, Georgia, where she was responsible for building the court's capacity by developing policies, programs, and processes to enhance the administration of justice and increase access to justice for all. Russell also held several positions in grant management, research, strategic planning, public relations, and communications in nonprofit, government, and education organizations. Russell holds a bachelor's degree in organizational leadership and a Master of Business Administration in innovation from Mercer University.

**Brian Scott**, *Principal, BDS Planning & Urban Design*

Brian Scott has more than 40 years of professional experience and founded BDS Planning in 2009 to solve strategic puzzles toward more vibrant, just, and sustainable communities. His professional practice focuses on inclusive processes, consensus facilitation, organizational development, and place management. Strategic planning and racial equity in 9-1-1 communications are particularly relevant specialties. Brian a Ph.D. in Urban Studies from Portland State University.

**Jeff Streeter**, *Executive Director, Jefferson County Communications Center Authority*

Jeff Streeter currently serves as the Executive Director of the Jefferson County Communications Center Authority. He is a retired Chief of Police for the Lone Tree Police Department in Colorado, with more than 30 years of experience in the field. Streeter holds a bachelor's degree in Criminal Justice/Police Science and Sociology from the Metropolitan State College in Denver, Colorado. He also completed the Senior Management, Leadership at the FBI National Class #241.

**Adam Timm**, *Consultant and Founder, The Healthy Dispatcher*

Adam Timm began his 17-year career in public safety as a 9-1-1 dispatcher for the Los Angeles Police Department, where he spent over a decade under the headset. He left the LAPD after founding his training and consulting company to provide classes, conference sessions and culture change consulting services to dispatchers across the country. Adam's energetic presentations and uplifting message have made him one of the most highly regarded speakers in the 9-1-1 industry.

**Ashley Tjaden**, *Business Services/Equity & Diversity Coordinator, Bureau of Emergency Communications (9-1-1)*

Ashley Tjaden currently serves as the Equity Coordinator at the Portland (OR) Bureau of Emergency Communications (9-1-1). She has a background in Code Enforcement and has worked in several public utilities departments including Water, Sewer & Stormwater, and Garbage. She specializes in community engagement with diverse communities. Tjaden holds a bachelor's degree in Community Development with an emphasis on Community Organization and Change from Portland State University.

**Vikki Wachino**, *Principal, Viaduct Consulting*

Vikki Wachino has worked for more than 25 years to advance stronger health care systems for low-income people in the U.S. She is the former deputy administrator of the Centers for Medicare and Medicaid Services, for which she oversaw all policy and operations for Medicaid and the Children's Health Insurance Program and led historic efforts to expand Medicaid coverage, reduce the nation's uninsured rate, and strengthen state health care delivery systems. Ms. Wachino is the author of many publications on Medicaid coverage and financing and speaks frequently on these topics, including in

testimony before Congress. She is a graduate of Harvard's Kennedy School of Government and Mount Holyoke College.

**Kim Westcott**, *Senior Program Officer, Criminal Justice Grantmaking, Charles and Lynn Schusterman Family Philanthropies*

Kim Westcott is a Senior Program Officer in Criminal Justice Grantmaking with Charles and Lynn Schusterman Family Philanthropies, supporting the new portfolio focusing on ending mass incarceration, increasing opportunities for those impacted by the criminal legal system and promoting the health and safety of all communities. Throughout her career, Kim has been committed to addressing root problems and promoting systemic change that builds the power of communities of color. Before joining Schusterman Family Philanthropies, Kim served as Associate Counsel in the Community Service Society of New York's Legal Department, where she developed human rights centered strategies and programming to remove barriers to employment for the formerly incarcerated and expand opportunities to fully participate in the life of the community.

**Wes Wright**, *Executive Director, Next Generation 911 Institute*

Wesley (Wes) Wright serves as the Executive Director of the Next Generation 911 Institute and is a recognized expert on federal and state rules relating to 911 services, including 911 reliability, interconnection, and outage reporting requirements. Wright holds a bachelor's degree from the College of Wooster and a J.D. from the University of Akron, School of Law. As a Partner at Keller and Heckman, he also represents trade associations and corporate clients on policy matters before the FCC and assists clients with all aspects of FCC enforcement investigations. Prior to rejoining Keller and Heckman, Wes worked as an in-house attorney for a telecommunications company where he advised the company's subsidiaries on federal and state regulations governing the 911 industry, VoIP requirements, and other telecommunications compliance matters of interest.

## Research Delegates

**April Feng**, *Senior Analyst, Center for Radical Innovation for Social Change at the University of Chicago*

April Feng is a Senior Analyst at the Center for Radical Innovation for Social Change (RISC) at the University of Chicago. Feng worked previously as the Deputy Director of Economic Empowerment for the City of South Bend under Mayor Pete Buttigieg, and as a Legislative Aide in the UK House of Commons. Feng received a bachelor's degree in Economics and Political Science from the University of Notre Dame, as well as a master's in philosophy and Public Policy with Distinction from the London School of Economics and Political Science.

**Lois James**, *Assistant Dean of Research, Washington State University College of Nursing*

Lois James is an associate professor in the Washington State University (WSU) College of Nursing, where she focuses on bias, stress, sleep, and performance in "high stress" populations such as police officers, military personnel, nurses, and top tier athletes. She is one of a handful of research advisors for the International Association of Chiefs of Police, has received multiple honors and awards for her work, and is internationally recognized as a leading expert in her field. Dr. James's simulation-based research on the impact of bias on police decision making has significantly advanced what is known about how suspect race and ethnicity (as well as other factors) influences police officers during critical encounters with the public. She is the founding director of Counter Bias Training Simulation (CBTsim), a novel and innovative simulation-based implicit bias training program that has been featured in National Geographic and the recent feature-length documentary "bias." Dr. James's work has been published extensively in academic journals, practitioner magazines, and mainstream media such as the New York



Times and the Washington Post. During her time at WSU, James has brought in approximately \$6,000,000 of extramural funding, making her an important contributor to WSU's "Drive to 25" goal of being recognized as one of the nation's top 25 public research universities, preeminent in research and discovery, teaching, and engagement by 2030.

**Michelle Lilly, Professor of Clinical Psychology, Northern Illinois University**

Dr. Michelle Lilly is a licensed clinical psychologist, who received her doctorate in clinical psychology from the University of Michigan where she completed a post-doctoral fellowship before becoming a faculty member at Northern Illinois University. She has previously worked as a Co-Investigator on a federally funded grant examining the impact of NG9-1-1 on telecommunicators. In 2019, Dr. Lilly developed Illinois funded "Saving Blue Lives," a two-day training for law enforcement on PTSD, suicide, peer support, and resilience.

**Jim Marshall, Co-Founder, 911 Training Institute**

Jim Marshall is a Co-Founder of the 911 Training Institute with his sister, Deborah Achtenberg, and his wife, Linda Marshall. He currently serves as the CEO and Lead Instructor for 911TI, strategically leading the organization in development of curriculum and resources to benefit the 9-1-1 industry. Jim is a leading voice in the 9-1-1 industry for mental health and dispatcher wellness. He is a mental health professional and educates telecommunicators in personal stress resilience and mastery of calls involving suicide and mental illness. Jim is co-editor of *The Resilient 9-1-1 Professional: A Comprehensive Guide to Surviving & Thriving Together in the 9-1-1 Center*. Jim has served on the Editorial Board of the *Journal of Emergency Dispatch* and as Co-chair of the NENA Working Group that produced the NENA Standard on Acute/Traumatic and Chronic Stress. He also served as the Chair/CEO of the 911 Wellness Foundation, a former non-profit organization that was devoted to fostering the well-being of 9-1-1 professionals through research, education, policy, and intervention.

## **Alternative First Responders**

### **Co-Chairs**

**Sean Goode, Executive Director, Choose 180**

Sean Goode is a speaker, facilitator, writer, podcast host, executive coach, and nonprofit leader who is driven by his mantra, "possibilities over problems," which was born out of his lived experience growing up in what was overwhelmingly challenging circumstances. Through his stewardship of the now nationally recognized nonprofit, CHOOSE 180, he has worked to decriminalize youthful behavior and transform the very systems that have historically caused harm to marginalized communities. Prior to leading this 2021 City of Seattle Human Rights award-winning organization he served as a chaplain in juvenile detention, championed gang and group intervention efforts, and worked to provide education and employment opportunities for youth in at-risk communities.

Sean Goode is considered a national expert on justice reform and has been appointed by the Washington State Governor to the Partnership Council on Juvenile Justice where he serves as the vice chair working to address statewide issues surrounding the criminalization of adolescent behavior. As a thought leader, Sean is regularly sharing his own personal journey, the transformative power of grace and the impact of elevating possibilities over problems with a diversity of audiences in both the private and public sector.

**Gabriel Rodriguez**, *Chief of Police, Camden, New Jersey*

Chief Gabriel Rodriguez assumed command of the Camden County Police Department on December 31, 2020. An East Camden native Chief Rodriguez has served the City of Camden as a police officer for more than seventeen years. Chief Rodriguez graduated from the prestigious Senior Management Institute for Policing in 2019, earned his bachelor's degree from Fairleigh Dickinson University, and is currently completing a master's degree in public administration. Chief Rodriguez is recognized as a plank-holding member of the department, playing a key role in the creation and successful stand-up of the department in 2013. Throughout his career Chief Rodriguez has served in many capacities including uniformed operations, investigations, community leadership, and executive commands.

## Members

**Rebecca Brown**, *Owner and President, Further The Work*

As founder and President of Further The Work, Rebecca seizes opportunities to build better justice wherever she can. Fiercely committed to both equity and excellence and noted for her uncommon ability to forge effective partnerships among highly diverse stakeholders, Rebecca has proven capacity to design progressive, effective, transformative, and fundable initiatives that significantly shift collective premises, policies, and practices. Among her other work, Rebecca has designed a nationally recognized Misdemeanor Early Representation program to advance procedural justice and reduce failures to appear and related warrants; designed a public/private collective impact reentry center that has served as a replicable model for other jurisdictions; and designed and is managing a national project to advance effective implementation of LEAD initiatives across the country. Rebecca holds a bachelor's degree from the University of California at Berkeley and a master's degree from Stanford University, where she is also completing her PhD.

**Joseph Cortez**, *Associate Professor, University of Southern California*

Joseph retired as the Executive Officer in the Office of the Chief of Police at the Santa Monica Police Department and is currently employed as a faculty member at the University of Southern California, where he teaches undergraduate and graduate level courses in public policy and organizational leadership. Joseph is also a decorated NSW combat veteran and member of several veteran associations. Joseph represents the Los Angeles County Police Chiefs for the Los Angeles Urban Areas Security Initiative (UASI) program for Unmanned Aviation related matters, Chairs the Unmanned Aviation Working Group for the LA/LB UASI program, and is the Co-Chair for the Research and Policy Committee for the International Association of Chiefs of Police.

**Katie Camp**, *Senior Program Manager at The Policing Project, New York University School of Law*

**Brendan Cox**, *Director of Policing Strategies, LEAD Support Bureau*

Brendan Cox is the Director of Policing Strategies for the LEAD Support Bureau. He was born and raised in Albany, NY and maintains his Bureau office there. Prior to coming to the Bureau, Brendan worked for the Albany Police department for 23 years and retired as the Chief. Albany was the third City to adopt and implement LEAD. Brendan enjoys the hands-on work at the Bureau and helping communities across the country work to reform how systems look at problematic substance use, mental health, and poverty.

**Dolores (D.C.) Ernst**, *Program Administrator for Community Assistance Program, City of Phoenix*

Dolores Ernst is the Program Administrator for the City of Phoenix Community Assistance Program. Ms. Ernst has been the Administrator since June 2021. She has been an employee with the Community Assistance Program since 2006. For 3 years, Dolores served as Adjunct Faculty with Maricopa

Community Colleges and taught a variety of social work courses. Dolores received a Master of Social Work from Arizona State University.

**Naji Fenwick**, *Program Manager, Vital Strategies*

Naji Mujahid Fenwick, Esq. is the Program Manager of Police Assisted Diversion (PAD) at Vital Strategies' Overdose Prevention Program, a seconded position to the City of Philadelphia Managing Director's Office of Criminal Justice. Among other duties, he supports the Assistant Director of Diversion and Deflection in their efforts to develop and implement improvements to the PAD program model and advance harm reduction approaches in law enforcement, including strategies to reduce overdose by diverting people away from arrest to supports and services.

**David Heppard**, *Executive Director, Freedom Project Seattle*

David knows first-hand the impacts of mass incarceration after being incarcerated at 16 years old with a de facto life sentence. Due to his juvenile status when he was convicted, and the passage of the 5064 bill, he was released after 24 years of confinement. He now works toward developing partnerships with other community providers whose mission is in alignment with making advancements in criminal justice and prison reform. He is also a Credible Messenger, which is a national initiative of adult men and women from similar backgrounds who equip young people with the tools to heal their lives and provide them with a living example of hope and transformation.

**Daniel Kornfield**, *Executive Director, Dignity Best Practices*

Dan Kornfield has led best-practices research, benchmarking, and consulting teams at Corporate Executive Board and Frontier Strategy Group, serving executives within large enterprises. In 2016 he pivoted to work with city governments, to help them pioneer their practices in public safety. He has served in Washington DC as a Senior Budget Analyst in the Office of the City Administrator, as a sworn reserve Police Officer and as Supervisor of the Research and Analytical Services Branch within the Metropolitan Police Department.

**Lionel King**, *Program Specialist, Law Enforcement Action Partnership*

Lionel King is a Program Specialist for Law Enforcement Action Partnership in addition to being an ethnographer, author, and researcher. He holds a PhD in Intercultural Relations. His research centers on the use of religious/cultural practices in mental health treatment. Lionel is a New Orleans native and a proud husband and father.

**India Hayes Larrier**, *State Advocacy Manager, Community Catalyst*

India Hayes Larrier, MPH, is a state advocacy manager for Community Catalyst, a leading non-profit national health advocacy organization dedicated to advancing a movement for health equity and justice. Through technical assistance, coaching, and coalition building, Mrs. Larrier builds and maintains relationships with national, state, and local partners. She especially works with those organizations seeking transformative approaches to addiction.

Before joining Community Catalyst, India worked as associate state director for advocacy at AARP NJ, where she organized community partnerships and coalitions. She also coached volunteer advocates and members of the 50+ community to inform peers and state and federal legislators on issues of concern and advocate for amendments and passage of legislation beneficial to New Jersey. Before AARP, as a health care organizer for the state-wide advocacy and social justice organization, New Jersey Citizen Action, she organized and spoke out at events in defense of the Affordable Care Act, expansion of substance use disorder treatment, and prevention services for youth and young adults. She served two terms in elected office as Township Committeewoman in Maplewood, NJ.

**Janelle Marcellis**, *Police Commander, University of Chicago*

Janelle is an experienced Police Commander at the University of Chicago who has demonstrated history of working in all levels of law enforcement including public, private, state, federal and the higher education industry. Janelle has served in law enforcement for more than twenty years and is skilled in Patrol Operations, Investigations, Community Relations, Emergency Management, and Crisis Intervention. Janelle graduated from Northwestern University School of Police Staff and Command and earned two bachelor's degree in law enforcement justice administration and psychology from Western Illinois University and a master's degree in public safety administration from Lewis University.

**Matthew Moody**, *Director, Contact Center Operations at Crisis Response Network*

Matthew Moody serves as the Director of Contact Center Operations at Solari Crisis Response Network. In this role, he oversees 100 employees in a crisis contact center that fields over 25,000 calls per month. He also provides oversight to 2-1-1 Arizona, which offers information and referral services to the state of Arizona. He has over ten years of experience in the behavioral health field, specializing in case management, crisis, and counseling services. Matthew is passionate about veteran support, increasing public knowledge of mental health issues, and reducing mental health stigma. With a strong desire to prevent suicide, Matthew leads innovative change to improve the lives of those with mental illness. Matthew earned a Bachelor of Psychology degree and a Master of Science degree in Counseling from Arizona State University. Matthew also serves on the Board of Directors for Mental Health America of Arizona.

**Brianna O'Steen**, PhD, *Senior Public Policy Associate, Mark43*

Brianna O'Steen is an interdisciplinary researcher whose expertise sits at the intersections of public policy, health, and safety. Brianna is particularly passionate about human-centered policy design and evaluation to promote equitable public policy and social programs. She is a mixed methods practitioner employing econometric, traditional qualitative, and content analysis aided by machine learning and natural language processing methodologies in her work. Currently, Brianna holds the position of Senior Public Policy Associate at Mark43 where she and colleagues leverage public policy and cloud-native software to connect communities and increase public safety. Prior to this position, Brianna O'Steen was a Doctoral Candidate at Oregon State University studying the social and economic costs and benefits of labor migration policies in the Philippines. Brianna also holds advanced degrees in Public Health and Applied Anthropology from the University of South Florida.

**Emily Perish**, *Co-Founder, Comprehensive Care Institute*

Emily joined the CCP team while pursuing her Master of Public Policy at the University of Chicago where she focused on health policy, inequities, and economics. After graduating, she was selected to participate in the Administrative Fellowship at University of Chicago Medicine, continuing to work with the CCP program around development and expansion. Before graduate school, Emily managed district operations and strategic development within the Illinois House of Representatives and performed independent research about the use of mobile health interventions to improve maternal health outcomes. Emily is passionate about increasing access to high quality, holistic health care for all people.

**Matt Perkins**, *Program Director, Local Initiatives Support Corporation*

Matt Perkins is an expert in community-based crime reductions efforts and advocate for resident-based crime prevention efforts. Matt joined LISC in 2013, his work has included supporting community-based approaches to reducing crime and increasing safety. The goals of this work are to help residents improve their neighborhoods' safety and health through community action and capacity building in equal partnership with local law enforcement agencies. He has been a lead technical assistance

provider on multiple U.S. Department of Justice (DOJ) programs, trainer for local LISC partners and collaborator with criminal justice policy and research organizations. Prior to working with LISC, Matt was a technical assistance provider for the federal Weed and Seed crime prevention program, provided crime reduction support to HUD and public housing agencies nationwide, and worked at DOJ's Office of Community Oriented Policing Services.

**Monika Witt**, *Policy Manager, National Council for Mental Wellbeing*

Monika is an experienced project manager and program evaluator working across sectors with nonprofit organizations, government agencies and higher education institutions. She has a strong interest and passion for working with individuals with complex health and social needs. She has specific experience breaking down structural and systemic barriers to accessible behavioral health care, and affordable housing. Additional experience includes working within the Sequential Intercept Model to decrease the number of individuals with behavioral health needs in the criminal justice system.

## Research Delegates

**Amir Chapel**, *Policy Analyst, National Institute for Criminal Justice Reform*

Amir Chapel is a Policy Analyst at NICJR. Amir coordinates projects and initiatives, often with local government agencies or other stakeholders. Amir conducts research on policies, programs, strategies, and organizations in the fields of criminal and juvenile justice, youth development, violence reduction, organizational development, and other relevant areas through the collection and analysis of data. Amir also coordinates legislative and policy advocacy initiatives. Amir has been directly impacted by the criminal justice system as a formerly incarcerated person who is dedicated to improving the outcomes of those that cannot advocate for themselves.

**Aili Malm**, *Professor of Criminology and Criminal Justice, California State University, Long Beach*

Dr. Aili Malm is a Professor in the School of Criminology, Criminal Justice and Emergency Management at California State University, Long Beach. She is interested in the assessment and evaluation of policing strategies and intelligence. She has worked as a PI or Co-PI for over \$6 million in grants. She has published over 40 research articles and two books including *Disrupting Criminal Networks* with Gisela Bichler, and *Cops, Cameras and Crisis* with Mike White. She has also worked with several police departments across the globe, including the Royal Canadian Mounted Police, British Home Office, Danish National Police, and numerous local departments across the United States.

**Amy Watson**, *Professor, Helen Bader School of Social Welfare, University of Wisconsin-Milwaukee*

Dr. Watson is a professor at Helen Bader School of Social Welfare at University of Wisconsin-Milwaukee. Professor Watson has worked extensively on issues involving the relationship between the criminal justice system and mental health systems in Chicago and around the country. Her research has focused on police encounters with persons with mental illnesses, the Crisis Intervention Team (CIT) model, and opportunities to reduce police involvement. Dr. Watson has published extensively on this work and presented findings to local, national, and international audiences.

## 911 Hotline Alternatives

### Co-Chairs

**Jasmine Desiderio**, *Deputy Director of Albuquerque Community Safety Department, City of Albuquerque, New Mexico*

Jasmine Desiderio previously served as the Project Director of a Native American Youth Suicide Prevention program, where her roles included strategic action planning, policymaking, program development and evaluation, community outreach and engagement, data surveillance, grant administration and training facilitation. Desiderio brings eight years of experience in coordinating multidisciplinary, interservice and interagency teams to strategically design and implement injury prevention services ranging from crisis intervention, suicide prevention and postvention programs in northwestern New Mexico. She is currently in the Organization, Information and Learning Sciences Ph.D. program at the University of New Mexico. Her research interest focuses on applying innovative methods of human performance technology, organizational development, and evaluation research to address adversities amongst marginalized populations. Desiderio holds a Master of Arts in Professional Counseling and Guidance from New Mexico Highlands University, and a Bachelor of Arts in both Psychology and Criminology from the University of New Mexico.

**Moki Macias, Executive Director, Policing Alternatives & Diversion**

Moki Macias is the executive director at the Policing Alternatives and Diversion Initiative (PAD), which started as a pre-arrest diversion program in Atlanta for people detained for violations related to substance use, mental health, or extreme poverty. She says developing a non-police public safety response requires determining what drives police involvement in the first place. Prior to this position, Moki served as an Instructor for the Region IV Public Health Training Center. Moki Macias earned a bachelor's degree in International Relations from Mt. Holyoke College and a Master of City Planning in Land & Community Development from Georgia Institute of Technology.

**Mary Naoum, Crisis Response Design Consultant, Policing Alternatives & Diversion Initiative**

Mary Naoum serves Policing Alternatives & Diversion Initiative (PAD) through her role as Crisis Response Design Consultant. Mary has spent many years in relationship with communities directly impacted by over-policing and incarceration, particularly towards efforts to reimagine community safety and wellness using artistic expression and grassroots advocacy. Most recently, she supported the development of a Detroit-based social justice fund, helping steward a community-defined grantmaking strategy focused on moving significant resources to community organizing led by Black, Indigenous and people of color. Mary received her master's degrees in Public Policy and Social Work from the University of Michigan, and is most passionate about moving forward tangible, community-driven solutions that are boldly designed to transform local systems.

**Mariela Ruiz-Angel, Director of Albuquerque of Albuquerque Community Safety Department, City of Albuquerque, New Mexico**

Mariela Ruiz-Angel is a proud Chicana, born and raised in the border city of El Paso, Texas. She understands the needs of diverse communities and works to empower, educate, and advocate for all Burqueños. Prior to her appointment as Director of ACS, Ruiz-Angel was the City Coordinator for the Office of Immigrant and Refugee Affairs (OIRA). In her new role leading the third branch of public safety, Ruiz-Angel is working to ensure that the department follows through with its mission of advocating and promoting a citywide culture that values the voices of all residents. She brings to the City of Albuquerque an extensive background in education, business development, and corporate customer relations. Ruiz-Angel holds a Master of Business Administration in Human Resources and a Master of Social Work in Leadership and Administration.

## Members



**Victor Armstrong, Chief Health Equity Officer, North Carolina DHHS**

Victor Armstrong serves as North Carolina DHHS Chief Health Equity Officer, with responsibility for leading the overarching strategy and operational goals to promote health equity, diversity, and inclusion across all the agency's health and human services. Victor joined NC DHHS as Director of the NC Division of Mental Health, Developmental Disabilities, Substance Abuse Services in March of 2020. Prior to accepting this role, Victor spent six years as Vice President of Behavioral Health with Atrium Health. Based in Charlotte, NC Victor had responsibility for operations of Atrium's largest behavioral health hospital, Behavioral Health Charlotte. Victor currently serves on the board of directors for the American Foundation for Suicide Prevention (AFSP) of NC. He is also former board chair of NAMI NC, and a member of National Association of Social Workers (NASW). Victor is a former member of the board of directors of National Council for Behavioral Health, i2i Center for Integrative Health, and RI International.

**Phil Ashlock, Director of Data & Analytics, GSA Technology Transformation Services**

Phil Ashlock creates digital civic infrastructure to support open government and civic engagement. He's spearheaded community-driven civic technology initiatives with global reach like the Open311 standard for interacting with government through an open feedback channel. Currently he leads the Data & Analytics portfolio in the GSA Technology Transformation Services Division and serves as the Chief Architect for Data.gov where he oversees an open development process and a federated architecture supporting open data and APIs across government. Previously, he served as a Presidential Innovation Fellow working with the GSA and the White House Office of Digital Strategy. Before joining government, Phil was at OpenPlans, a civic tech non-profit where he served as the Open Government Program Manager and established the Open311 initiative. Open311 is a standard for publicly reporting and tracking civic issues and is now implemented by dozens of cities around the world. Through a partnership between OpenPlans and Code for America he then co-founded Civic Commons, a pilot initiative to help governments share technology and their experience using it.

**Martin Bennett, Executive Director, Cook County Sheriff's Police 911 Center**

Martin Bennett is Executive Director of Emergency Communications/911 Center at the Cook County's Sheriff's Department. Martin's experience includes redesign of two PSAPs, upgrade of Computer Aided Dispatch (CAD), cybersecurity, procurement, and implementation of NG911 services, hiring/recruitment, network infrastructure and Standard Operating Procedures (SOP) development. Martin earned a Bachelor of Science in Criminal Justice and Political Science from MacMurray College and master's degree in Emergency Management from Jacksonville State University.

**Tim Black, Former Director of Consulting, White Bird Clinic**

Tim Black was the director of consulting for White Bird Clinic in Eugene, Oregon. His primary focus was on development and support of behavioral health first-response programming in North America, based on the CAHOOTS (Crisis Assistance Helping Out On the Streets) model run by the clinic. He is an experienced professional with extensive background in direct service, harm reduction and mobile crisis intervention. Black began working with White Bird Clinic in 2010 as a crisis intervention worker. He served as CAHOOTS operations coordinator from 2014 to 2020, overseeing the day-to-day operations of CAHOOTS, as well as relationships with local and national media, consultation, program development and expansion, fundraising, and communication and coordination with local and state government agencies. Prior to his work with CAHOOTS, Black worked with Looking Glass Community Services; with SageWalk, The Wilderness School; with the Northwest Youth Corps; as an Americorps volunteer; and with a youth environmental conservation program.

**Greg Bloom**, *Founder, Open Referral Initiative*

Greg Bloom is the founder of Open Referral, which is promoting open access to information about the health, human, and social services available to people in need. He is a strategic advisor on community resources and engagement for the Gravity Project. He is also a visiting scholar at Indiana University's Ostrom Workshop on the Commons. Previously, Greg managed communications for Bread for the City in DC. He has been a fellow with Provisions Library and Civic Hall Labs, and has published writing in *In These Times*, *Civic Quarterly*, *Personal Democracy Forum*, and *Code for America's Beyond Transparency*.

**David Covington**, *CEO & President, RI International*

David Covington serves as CEO and president of RI International, is an owner of Behavioral Health Link, and leads the international initiatives Crisis Now and Zero Suicide. He is a two-time national winner of the Council of State Governments Innovations Award, in 2008 with the Georgia Crisis & Access Line and again in 2012 with Magellan Health. For five consecutive years, he competed as a national finalist in innovations award competitions, including Harvard University's Innovations in American Government in 2009. Mr. Covington has served as a member of the National Action Alliance for Suicide Prevention since it was created in 2010, co-chairing task forces on clinical care and crisis services. He has served as vice chair of the National Suicide Prevention Lifeline SAMHSA steering committee since it was created in 2005 and as the clinical division chair of the American Association of Suicidology since 2014. He served on the National Council for Behavioral Health board of directors from 2011 to 2014 and the Relias Learning Behavioral Health Advisory Board from 2014 to 2016.

**Vinny Eng**, *Director of Policy and Advocacy, Safer Together SF Bay Area*

**Susan Frankel**, *Chief Executive Officer, National Runaway Safeline*

Susan Frankel is an experienced Chief Executive Officer with a demonstrated history of working in the non-profit organization management industry. Susan is skilled in Nonprofit Organizations, Customer Insight, Business Planning, Event Planning, and Sales, and withholds strong business development professional with a Master of Social Services Administration focused on Social Services & Public Policy from University of Chicago. Prior to their Chief Executive Officer position, Susan served as President & CEO of a nonprofit named Crayons to Computers.

**Kevin Hall**, *Assistant Chief, Tucson Police Department, Arizona*

Assistant Chief Kevin Hall is a thirty-year member of the Tucson Police Department, joining the department in 1992. He has held the position of patrol officer, detective, patrol sergeant, SWAT sergeant, investigative sergeant, patrol lieutenant, Field Services Bureau Executive Officer, patrol captain, and now assistant chief. He has worked in various assignments within the department to include Operations Divisions South, Midtown, East, the Gang Unit, Physical Child Abuse Unit, Internal Affairs, Homicide, and the Home Invasion/Kidnapping Unit. Assistant Chief Hall developed and implemented a comprehensive pre-arrest deflection program in 2018 in Tucson for both misdemeanor and felony non-violent charges associated with substance misuse.

**Richard LaPratt**, *Member, 211 Database and Technology Director, United Way of Southwestern Pennsylvania*

**Jason Renaud**, *Program Coordinator, Law & Mental Health Conference*

Jason Renaud is a Program Coordinator for the Law & Mental Health Conference and Board Officer for the Mental Health Association of Portland. Prior to this position, Jason devoted their efforts in research and development for an organization named Compassion & Choices. Jason Renaud earned a Bachelor of

Arts in Philosophy from The Evergreen State College, and a master's degree in Public Administration from Portland State University.

**Raymond Schwartz**, *Co-President, NAMI New York City Metro*

Raymond Schwartz is a highly skilled nonprofit executive and manager with a deep knowledge of health care policy and over 35 years of experience in the mental health field. For over 20 years, first as associate executive director and then as executive director, Raymond guided Venture House, an accredited and respected New York City Clubhouse, to successfully support people with a serious mental illness to live in their community at the same time meeting the challenges of a changing health care financing environment. He has served on the Board of Directors of the Coalition of Behavioral Health Care Agencies and the NY State Association of Psychiatric Rehabilitation Services (NYAPRS). Raymond is a member of the faculty for Clubhouse International. He holds a certificate in Nonprofit Management from Columbia University School of Business and a master's degree in Cultural Anthropology from New York University.

**Jaime D. Young**, *Consultant, Mission Critical Partners, LLC*

Jaime's career has spanned 40 years in the San Francisco Bay Area, where she gained expertise in public safety communications management, including, administration, operations, technical systems, and personnel management in municipal and county government. She served on the California State 911 Advisory Board, the Executive Board of the California Chapter of NENA and is the current representative from the Public Safety Dispatch Advisory Council to the California Commission on Peace Officer's Standards and Training. She is currently a consultant with Mission Critical Partners LLC, working with 911 and public safety clients to address a variety of challenges that impact their ability to optimize desired performance and outcomes.

## Research Delegates

**Amir Chapel**, *Policy Analyst, National Institute for Criminal Justice Reform*

Amir Chapel is a Policy Analyst at NICJR. Amir coordinates projects and initiatives, often with local government agencies or other stakeholders. Amir conducts research on policies, programs, strategies, and organizations in the fields of criminal and juvenile justice, youth development, violence reduction, organizational development, and other relevant areas through the collection and analysis of data. Amir also coordinates legislative and policy advocacy initiatives. Amir has been directly impacted by the criminal justice system as a formerly incarcerated person who is dedicated to improving the outcomes of those that cannot advocate for themselves.

**Soledad McGrath**, *Executive Director, Northwestern Neighborhood & Network Initiative (N3)*

Soledad A. McGrath is a Research Professor at Northwestern University's Institute for Policy Research and the Executive Director of the Northwestern Neighborhood & Network Initiative (N3). Prior to joining Northwestern, she was a Senior Program Officer in the Gun Violence Prevention & Justice Reform Program at the Joyce Foundation where she developed and led the foundation's justice reform strategy, which included a focus on policing, criminal justice reform, and violence prevention. Prior to joining the Joyce Foundation, McGrath was a Program Officer with the John D. and Catherine T. MacArthur Foundation's Justice Reform program and was a member of a multidisciplinary team that designed and implemented its criminal justice reform strategy – a more than \$200 million initiative focusing on a network of jurisdictions throughout the country targeting excessive and unjust incarceration at the local level. She led the foundation's efforts to reduce racial and ethnic disparities in the justice system.

**Amy Watson, Professor, Helen Bader School of Social Welfare, University of Wisconsin-Milwaukee**

Dr. Watson is a professor at Helen Bader School of Social Welfare at University of Wisconsin-Milwaukee. Professor Watson has worked extensively on issues involving the relationship between the criminal justice system and mental health systems in Chicago and around the country. Her research has focused on police encounters with persons with mental illnesses, the Crisis Intervention Team (CIT) model, and opportunities to reduce police involvement. Dr. Watson has published extensively on this work and presented findings to local, national, and international audiences.

## **Emergency Communications Center Operations**

### **Co-Chairs**

**Edwin F. Huellstrouk, RN, BSN, NREMT-Paramedic, ECRN, TNCC, CEN, Emergency Room Nurse for Edward-Elmhurst Hospital in Naperville, IL**

Edwin F. Huellstrouk is currently an Emergency Room Nurse for Edward-Elmhurst Hospital in Naperville, IL. Edwin started his career in 1994 as a volunteer in the Montgomery Countryside Fire Protection District in Montgomery, IL. He became a paramedic and later achieved the rank of Captain. While on the department, he was a key part in advancing effective communications between the 911 dispatch center and the department. Edwin went on to become the EMS System Coordinator for the Southern Fox Valley EMS System of Northwestern Medicine – Delnor Hospital, Geneva, IL., as well as being firefighter and paramedic. As coordinator, Edwin was in charge of the five 911 dispatch centers and twenty Fire/EMS Departments. As coordinator he was responsible for the education and EMS regulations of both departments.

**Chad Kasmar, Chief of Police, Tucson, Arizona**

Chief Kasmar oversees the Department's four bureaus: Patrol Services, Investigative Services, Administrative Services, and Special Services and Innovation. Prior to being appointed Chief in 2021, he served as Interim Director of the City's Public Safety Communications Department, where he led efforts to stabilize the department, reducing attrition and increasing staffing while moving from a co-located but separate police and fire 911 call center to a consolidated 911 call center. As a captain in the Tucson Police Department Chief Kasmar served as Deputy Chief, as Chief of Staff, and as the Eastside Patrol Division Commander. As a lieutenant, he served as an Office of Internal Affairs (now Office of Professional Standards) Commander, and as a Westside Patrol Division Commander. As a sergeant and officer, he served in the Street Crime Interdiction Unit, Operations Division South Community Response Team, Operations Division Downtown, Operations Division Midtown, Bicycle Patrol, Operations Division South Solo Motor, and Hostage Crisis Team.

**Tyrell Morris, Executive Director, Orleans Parish Communication District**

Executive Director Morris came to Orleans Parish Communication District (OPCD) with more than 15 years of success leading operations within high profile diverse public, private and non-profit organizations. During that time, he experienced repeated success driving and leading large-scale operations to ensure standards of excellence and business prosperity. Mr. Morris is a consummate communicator with expertise in cross-functional collaboration and the ability to ensure buy-in and engagement from all stakeholders. After becoming Executive Director of OPCD, Mr. Morris recognized an opportunity to challenge his staff to consistently seek ways to be their best selves during each and every shift, and so developed the acronym, SHOWUP (S-Sincere, H-Honest, O-Optimistic, W-Well-informed, U-Upbeat, and P-Procedurally compliant). The development of SHOWUP and the buy-in from

OPCD staff has been a key factor in enabling OPCD to provide the citizens of New Orleans with top-notch emergency and non-emergency services when they need them most.

## Members

**Alicia Atkinson**, *Quality Assurance and Training Coordinator, Regional Emergency Dispatch Center, Northbrook, IL*

With over 15 years of experience in the 911 industry in both the public and private sector, Alicia Atkinson is currently the QA/Training Manager for Regional Emergency Dispatch (RED) Center in Northbrook, IL. RED Center serves as the dispatch center for fourteen fire departments in the near Chicago suburbs and Illinois MABAS Statewide and Special Teams responses.

**Martin Bennett**, *Executive Director, Cook County Sheriff's Police 911 Center*

Martin Bennett is Executive Director of Emergency Communications/911 Center at the Cook County's Sheriff's Department. Martin's experience includes redesign of two PSAPs, upgrade of Computer Aided Dispatch (CAD), cybersecurity, procurement, and implementation of NG911 services, hiring/recruitment, network infrastructure and Standard Operating Procedures (SOP) development. Martin earned a Bachelor of Science in Criminal Justice and Political Science from MacMurray College and master's degree in Emergency Management from Jacksonville State University.

**Ron Bruno**, *Executive Director, CIT International*

Ron Bruno serves as the Executive Director of CIT International. Ron is a founding board member of the corporation and previously served as the corporation's Second Vice President. Ron has been involved in CIT programing for over twenty years, serving the majority of his twenty-five-year law enforcement career as a CIT Officer, CIT Investigator, CIT Agency Coordinator, CIT Regional Coordinator, and as the State of Utah's CIT Program Director. Ron has spoken nationally and internationally on crisis response system reform. Ron is an appointed member of the Interdepartmental Serious Mental Illness Coordinating Committee (ISMICC). This committee, that was established by the 21st Century Cures Act, reports to the United States Congress to make recommendations for actions that federal departments can take to better coordinate the administration of mental health services for adults with serious mental illnesses and children with serious emotional disturbances.

**Bill Duggan**, *Director, FreCom Dispatch Center, Florence, Colorado*

Bill Duggan was appointed as director of FreCom dispatch center in Florence, Colorado in early 2020. He has been in public safety for over 30 years. He has been a volunteer firefighter Lieutenant/Safety Officer, an Emergency Medical Technician, and graduated first in his class from the 1991 Kansas Law Enforcement Training Center while being a patrol officer for the City of Andover, Kansas. Duggan became the 911 Director and the first Information technology director, serving with Andover for over 25 years. He then took on a new challenge of a newly consolidated center in Lyon County, Kansas, and again a newly consolidated center in Cochise County, Arizona.

**Donna L. Carrell**, *Training Manager, Northeast Oklahoma Enhanced 911 Trust Authority*

Donna is the Training Manager for the Northeast Oklahoma Enhanced 911 Trust Authority. She began in Emergency Communications in 2011 as a frontline telecommunicator. She became a training officer and shift supervisor and accepted her current position as training manager in 2018. Donna holds a bachelor's degree in Criminal Justice from Missouri Southern State University and a master's degree in Public Administration from Grand Canyon University. Her passion is leadership, and she is most proud of her APCO certification as a Certified Public-Safety Executive (CPE). Her goal is to use her leadership

skills to transform 911 into a partner that is deservedly recognized for the indispensable value it brings to the field of emergency services.

**Don Champley**, *Deputy Director, Regional Emergency Dispatch (RED) Center*

Don Champley started his career with the Regional Emergency Dispatch (RED) Center in Northbrook, Illinois in 1999. He was promoted to Deputy Director in 2020. He has a total of 35 years of experience in public safety with most of that time spent in the fire service where he has held every rank from Firefighter to Assistant Chief.

**Margaret Fine**, *Chair, Mental Health Commission for the City of Berkeley, California*

Margaret Fine serves as Chair of the Mental Health Commission and as a Mental Health Commissioner for the City of Berkeley. She is appointed to the Reimagining Public Safety Task Force for the City of Berkeley. Previously she served as a Deputy City Attorney in the Child Welfare Unit for the City of Philadelphia Law Department. Margaret Fine received her JD from the George Washington University Law School, MSc in Human Rights & Criminal Justice from Queen's University Belfast, and PhD in Sociology from the University of Liverpool.

**Audace Garnett**, *Technology Safety Project Manager, Safety Net at The National Network to End Domestic Violence*

Audace Garnett has over a decade of experience working in New York City with victims of domestic violence. She began her career in 2004 as a disability advocate at a non-profit organization named Barrier Free Living. Audace has also worked at the Brooklyn District Attorney's Office where she served as the Teen Services Coordinator in the Victim Services Unit. She was the liaison between survivors 24 and under the police department, courts, schools, and community organizations. After six years at the district attorney's office, she then went on to prevention and intervention work at a Teen Dating Violence prevention and intervention program named Day One where she trained adult professionals around the intersection of teen dating violence and domestic sex trafficking. She is currently a Technology Safety Specialist with Safety Net at NNEDV, where she focuses specifically on the intersection between domestic violence, sexual assault, stalking, and technology.

**Kelle Hall**, *Communications Manager for the town of Highland Park, Texas*

Kelle Hall is a Communications Manager for the town of Highland Park, Texas where they manage and direct the Highland park Department of Public Safety's Emergency Communications Center. Prior to this position, Kelle worked as lieutenant for the Randall County Sheriff's Office for 24 years. As lieutenant, Kelle oversaw the emergency communications center, warrants division, and records division and served as a Personnel and Training officer.

**Kim Lettrick**, *Communications Manager, Southeast Communications Center*

Kim Lettrick is the Communications Manager for Southeast Communications Center providing 911 and emergency dispatch service to Benton and Franklin Counties in Eastern Washington. Kim has 34 years of experience as a 911 professional holding numerous positions within the field Dispatcher, Supervisor, Training Coordinator, Certified Training Officer, Criteria Based Dispatch Instructor, APCO Certified Training Officer instructor.

**Erica Olsen Shaver**, *Safety Net Project Director, National Network to End Domestic Violence*

Since joining NNEDV in 2007, Erica has advocated on behalf of survivors of gender-based violence by educating and advocating victim service providers, policymakers, and technology companies on issues of technology abuse, privacy, and victim safety. She has provided trainings to technologists, attorneys, law



enforcement officials, victim advocates, and other practitioners in the United States and internationally. Through the Safety Net Project, Erica works with private industry, state, and federal agencies and international groups to improve safety and privacy for victims in this digital age. She regularly provides consultation to leading technology companies on the potential impact of technology design and reporting procedures on survivors of abuse. She also provides technical assistance on technology safety to professionals working with survivors. Erica's prior work at the New York State Coalition Against Domestic Violence included writing curriculum and training statewide on a project focusing on the intersection of domestic violence and disabilities. Erica has a MSW from SUNY Albany and a Certificate in Nonprofit Management from the Center for Women in Civil Society.

**Carlena Orosco, Research and Planning Supervisor, Tempe Police Department, Arizona**

Carlena Orosco, M.A. is a Doctoral Candidate in the School of Criminology and Criminal Justice at Arizona State University. She is also employed full-time as the Research and Planning Supervisor in the Strategic Planning, Analysis & Research Center (SPARC) at Tempe Police Department. Prior to joining Tempe PD, she worked as a Senior Research Analyst for the Arizona Criminal Justice Commission, Statistical Analysis Center. Carlena has worked on research projects spanning numerous content areas, including de-escalation in policing, police dispatchers, community crime patterns, and law enforcement decision-making. Additionally, she worked for nine years as a dispatcher for the Los Angeles County Sheriff's Department, where she also served as an Acting Supervisor and Systems Monitor. Carlena's subject-matter expertise in policing and crime analysis also led to her selection as a trainer for the UN-led effort to provide crime analysis instruction to new Crime Analysts in the Caribbean. She has also served as an Instructor for the Nature of Crime, Gangs, Crime Control Policies, Police Accountability, and Urban Crime Patterns courses. Currently, she is a research assistant on the ASU/Tempe PD SPI project under the guidance of Dr. Mike White. Carlena holds both a B.A. and M.A. in Criminal Justice from California State University, San Bernardino, and her work can be found in *Policing: An International Journal*, *Policing: A Journal of Policy and Practice*, and the *Journal of Criminal Justice*.

**Rick Pegues, Public Safety Communications Coordinator, Tucson, Arizona**

A native of Peoria, IL, and graduate of Eastern Illinois University, Rick served in the United States Air Force as Fire Protection Specialist, before transitioning to being an agent with the Office of Special Investigations. After tours in Saudi Arabia, Afghanistan, and Somalia, he retired from the USAF in 2013 and moved to Tucson, AZ, beginning a second career with the City of Tucson, Public Safety Communications Department. Initially a Fire Dispatcher, he was promoted to Supervisor in 2017 and subsequently to Coordinator in 2019. In that capacity, he began as training coordinator, and as a Certified Training Officer (CTO) before moving to Operations in 2021. His passion is serving the community at the frontline level by being active with his church, the Urban League, and the E.L.I.T.E youth outreach program.

**Richard Ray, Co-Chair, NENA Accessibility Committee; Member, FCC Disability Advisory Committee**

Richard Ray retired from the City of Los Angeles after serving over 35 years as an Americans with Disabilities Act Technology Access Coordinator to continue working in the field of Telecommunication Technologies, Emergency Services and advocating for civil rights of individuals who are deaf, deafblind, and hard of hearing in all levels of government. He is actively involved as a co-chair of the National Emergency Number Association (NENA) Accessibility Committee and the Federal Communications Commission (FCC) Disability Advisory Committee. He has served on the FCC various committees such as Text to 9-1-1, Real-Time Text to 9-1-1, Next Generation 9-1-1, Emergency Notification Systems, and other issues concerning communication access in support of federal, state, and local governments. He

was named as one of the top 25 Doers, Dreamers and Drivers and while featured in Government Technology Magazine in 2018. In 2019, he was inducted into NENA's Hall of Fame.

**Tony Ruffin**, *Co-Founder, Pillars and Bridges*

**Joe Smarro**, *Chief Executive Officer, SolutionPoint +, LLC*

Joe Smarro is a decorated combat veteran from the United States Marine Corps. He honorably served two tours to Afghanistan and Iraq with the 1st Battalion 4th Marines. In 2005 he joined the San Antonio Police Department (SAPD), where he became one of the original members of SAPD's Mental Health Unit, which Smarro helped to grow into a nationally recognized best practices policing unit. In addition to being one of the main subjects in the HBO documentary, ERNIE & JOE: CRISIS COPS, Smarro has been featured in multiple media outlets including the TEDx talk "I See You." He is the founder and CEO of SolutionPoint+, a national training and consulting firm that focuses on cultivating mental wellness to maximize human capital and promote safety within organizations.

**Kate Vander Wiede**, *Crisis Response and Prevention Project Manager, Allegheny County Department of Human Services*

Kate Vander Wiede is a Crisis Response and Prevention Project Manager for Allegheny County Department of Human Services, working on projects in which traditional first responders interact with individuals with behavioral health and human service needs. Kate has a bachelor's degree in Mechanical Engineering from the University of Colorado Boulder and a master's in Public Policy and Management from Carnegie Mellon University.

## Research Delegates

**Brian Aagaard**, *Research Analyst, RTI International*

Brian Aagaard, a member of our Policing Research Program, has extensive experience as a crime and intelligence analyst. Mr. Aagaard worked with law enforcement at the local, county, state, and federal levels for more than a decade. His areas of expertise include the collection, management, and analysis of law enforcement data. Mr. Aagaard's current work focuses on the intersection of policing, technology, and analysis. He is particularly interested in the dynamics of law enforcement-community interactions, specifically during routine encounters such as traffic stops. Prior to joining RTI, Mr. Aagaard worked as an analyst at the Onondaga Crime Analysis Center in New York State, the North Carolina State Bureau of Investigation Intelligence Unit, and the City of Durham (North Carolina) Police Department. He is a member of the International Association of Crime Analysts and became an IACA certified law enforcement analyst in 2013.

**Jessica W. Gillooly**, *Assistant Professor of Sociology & Criminal Justice, Suffolk University*

Jessica Gillooly joined the Sociology & Criminal Justice Department at Suffolk University in the Fall of 2021. Before transitioning to Suffolk, she was a postdoctoral research fellow at the Policing Project at NYU School of Law. Dr. Gillooly's research portfolio focuses on 911 dispatch, policing, organizations, and race. Central to this work is a large multi-method project about dispatch centers and the role the 911 system plays in the criminal justice system. Using a mix of quantitative, qualitative, and conversation analytic methods, she examines the process through which caller requests become police responses. One thread of her research examines the function of the 911 call-taker in mediating caller requests, and their impact on policing in the field. Another thread explores the public's reliance on 911 and identifies potential organizational policy reforms aimed at rethinking the current dispatch-and-response system.

**Jeremiah Johnson, Researcher; LEAD Scholar; Sergeant, Darien Police Department**

Jeremiah Johnson is a policing researcher and practitioner, currently serving in a sworn capacity with the Darien Police Department in Connecticut. During his policing career Jeremiah has worked as a patrol officer, field training officer, accreditation manager, patrol sergeant, detective sergeant, and acting lieutenant. A former National Institute of Justice LEADS Scholar (Class of 2016), Jeremiah is an advocate for evidence-based policing and practitioner-led research. He is an appointed member of the Connecticut Sentencing Commission and is affiliated with the National Police Foundation in Washington DC where he proudly serves as a Policing Fellow. Jeremiah holds a BA in Sociology from Geneva College, an MS in Justice Administration from Western Connecticut State University, an MA in Criminal Justice from John Jay College, and a PhD in Criminal Justice from the City University of New York Graduate Center.

**Rylan Simpson, Assistant Professor of Criminology, Simon Fraser University**

Rylan Simpson is an Assistant Professor in the School of Criminology at Simon Fraser University. He received his Ph.D. in Criminology, Law and Society from the University of California, Irvine (UCI). Prior to receiving his Ph.D., he received his B.A. in Sociology and Psychology from the University of British Columbia and his M.A. in Social Ecology from UCI. He is the recipient of numerous awards for his policing scholarship and engagement with policing officials. He is also an executive counselor for the American Society of Criminology's Division of Experimental Criminology, a member of the Canadian Association of Chiefs of Police's Research Advisory Committee, and a mentor for the Canadian Society of Evidence-Based Policing's Virtual Scholar Program.

## 911 Governance

### Co-Chairs

**Jerry Clayton, Sheriff, Washtenaw County, Michigan**

Jerry L. Clayton is a 30+ year Public Safety Services professional, currently serving his fourth term as the Sheriff of Washtenaw County. Sheriff Clayton leads an organization of approximately 420 staff, serving a population of over 358,000, covering a 720-square mile geographical area. During his career with the Sheriff's Office, Jerry served as a front-line Corrections Officer, Deputy Sheriff, and command officer. He was also appointed to the following executive positions; Corrections Commander, Police Services Commander and SWAT Team Commander). Sheriff Clayton serves on the boards of numerous local organizations. These include the Washtenaw Area Council for Children, the local Chapter of NAMI (National Alliance on Mental Illness), the Washtenaw County Mental Health Treatment Court Advisory Board, Washtenaw County Continuum of Care Board (ending homelessness) and the SafeHouse Center.

**Stephanie Olson, Strategic Planning & Performance Manager, Raleigh, North Carolina**

Stephanie Olson is the Strategic Planning & Performance Manager for the City of Raleigh. In this position, she is responsible for overseeing the implementation of the City's 5-year Strategic Plan, departmental business planning, and organization-wide performance management efforts. Stephanie enjoys helping the City make strides in strategic and data-informed decision making. Over the past year, Stephanie has been leading the City of Raleigh's efforts to review 911 calls for service and pilot and implement alternative responses.

**Jeanne Milstein, Director for Human Services, City of New London, CT**

Jeanne is currently the Director for Human Services in the City of New London. Prior to this position, Jeanne was Director of Special Projects and Staff Researcher at the Tow Youth Justice Institute,

University of New Haven. She served as Connecticut's Child Advocate from 2000 until 2012, an independent state agency responsible for overseeing the care and protection of children. Jeanne has led efforts to reform the foster care, juvenile justice and mental health systems for children and youth. In addition, Jeanne served as the Deputy Commissioner of Strategic Planning and Policy Development for the Office of Children and Family Services in New York State. Jeanne has also served as the Director of Government and Community Relations at the Department of Children and Families; Legislative Director at the Connecticut Commission on Children; Director of Government Relations at the Permanent Commission on the Status of Women; and Director of the Women's Center of Southeastern Connecticut.

## Members

### **Kurt August**, *Program Manager, Police-Assisted Diversion (PAD), City of Philadelphia*

Kurt August, MSW, is the Interim Director for the City of Philadelphia's Office of Criminal Justice. His work involves close collaboration with criminal justice partners and other City agencies to develop and implement policies designed to meaningfully address the racial, ethnic, and economic disparities in the criminal justice system. For the past 5 years, Kurt has worked at the intersection of the law enforcement and behavioral health communities by piloting a pre-booking diversion program, an Outreach focused Co-Responder pilot which embeds behavioral health professionals with law enforcement to collaboratively address quality of life issues in the Kensington/Harrowgate section of the City, and a 911 Triage Desk/Co-Responder model that embeds behavioral health professionals in the 911 Call Center to triage 911 calls and also pairs behavioral health professionals with CIT-trained police Officers in unmarked police vehicles in the field to address behavioral health calls that come in to the 911 Call Center in real time.

### **Peter Beckwith**, *General Counsel, South Sound 911*

Peter Beckwith serves as General Counsel for South Sound 911, a regional consolidated PSAP/ECC in Washington State (Tacoma). He received his law degree from Seattle University School of Law and his undergraduate degree from Washington State University. Within the 911 profession he is a graduate of the Association of Public-Safety Communications Officials (APCO) Certified Public-Safety Executive (CPE) program and is an elected board member of the NG911 Institute.

### **Timothy Bergel**, *Director of Support Services, Cook County Sheriff's Police*

Timothy Bergel currently serves as the Director of Support Services for the Cook County Sheriff's Office Emergency Communications Center. In his current role, Timothy oversees the Information Technology and GIS divisions within the ECC/9-1-1 and has served previously as a training instructor and communications supervisor. Timothy has nineteen years of public safety experience in emergency communications (2006-present) and emergency medical services (2003-2006). Timothy earned a Bachelor of Arts Degree in Criminal Justice from Benedictine University and a Master of Science Degree in Threat & Response Management from the University of Chicago – where he was named an Emerging Leader in Emergency Preparedness.

### **Ben Borchers**, *911 Triage Project Manager, City of Philadelphia's Office of Criminal Justice*

Ben Borchers is the 911 Triage Project Manager for the City of Philadelphia's Office of Criminal Justice and Public Safety. Ben recently joined the Philadelphia city government after working in the public health data and software consulting world for several years. Prior to earning his MPH from Drexel's Dornsife School of Public Health focusing on health policy, he taught high school for five years in Philadelphia.

**Daryl Branson, State 911 Program Manager, Colorado Department of Regulatory Agencies**

Daryl Branson currently serves as the State 911 Program Manager for the Colorado Department of Regulatory Agencies and is working with the staff of the Public Utilities Commission. He has worked as a public safety dispatcher, a shift supervisor, and Public Safety Answering Point (PSAP) director in Missouri, Wisconsin, and New Mexico, and most recently served as the executive director of the Colorado 9-1-1 Resource Center. Daryl earned his MPA in Public Administration from Missouri State University, and is certified as an Emergency Number Professional by the National Emergency Number Association and a Registered Public Safety Communications Leader by the Association of Public Safety Communications Officials, Intl.

**Richard Collins, Director of Emergency Services, Sarasota County Government**

Richard Collins currently serves as Director of Emergency Services for Services, Sarasota County Government where they provide strategic direction, leadership and mentoring to Sarasota County emergency services departments including Fire Rescue, Emergency Management, Public Safety Communications, and Lifeguard Operations. Leads a high-performing team of public safety professionals and leaders in the delivery of emergency services to the residents and visitors of Sarasota County. Prior to this position, Richard held titles of Emergency Management Director and Fire Chief in Osceola County Government, Florida, for 9 years. Richard Collins earned a master's degree in Organizational Leadership from Palm Beach Atlantic University. In totality, Richard has over 32 years of public safety experience in both Illinois and Florida.

**Chris Fisher, Senior Advisor, Office of the United States Attorney General**

Christopher Fisher is the Senior Advisor, Office of the United States Attorney General. Previously he served as the Chief Strategy Officer for the Seattle Police Department and was Senior Policy Advisor at the Council of State Governments Justice Center with a focus on law enforcement issues. Prior to the Justice Center, Chris worked throughout the New York City justice system. As Director of Analysis and Integrated Solutions in the New York City Mayor's Office of Criminal Justice, he coordinated interagency efforts to solve criminal justice challenges. Chris has served in similar capacities for other New York City criminal justice agencies, including the New York City Police Department, the Department of Probation, the Administration for Children's Services, and the former Department of Juvenile Justice. Chris holds a doctorate in criminal justice from the Graduate Center of the City University of New York, a master's degree in criminal justice from John Jay College of Criminal Justice, and a Bachelor of Arts degree in psychology from the University of Virginia.

**Kris Henderson, Executive Director of Amistad Law Project**

Kris Henderson is the Executive Director of Amistad Law Project. They grew up in East Orange, New Jersey— a majority Black, working class community. Their educational career began in East Orange's underfunded schools, continued at a private Christian School, and led to boarding school in New England for high school. Their diverse educational experiences and the realization that a quality education is possible but often incredibly expensive, led them to work towards making sure we all have what we need. They are a movement lawyer, a co-founder of Amistad and a co-founding member of the Coalition to Abolish Death By Incarceration. They are on the steering committee of Free The Ballot! Incarcerated Voter Family Network and on the board of directors of Black Youth Project 100. They are a 2018 Law for Black Lives and Movement Law Lab Legal Innovators Fellow and a 2019 Soros Justice Fellow.

**Jason Hernandez, Executive Director of Intergovernmental Relations, Cook County Sheriff's Department**

Jason Hernandez currently serves as Executive Director of Intergovernmental Relations for Cook County

Sheriff's Department as of September 2021. Prior to this position, Jason was Director of Government Affairs for Reyes Kurson, Ltd and Chief of Staff to Alderman Deborah Mell for the City of Chicago. Jason Hernandez has earned a Bachelor of Arts in Political Science and Government and Communication and Media Studies from Loyola University Chicago.

**Sally Lawrence, E911 Coordinator, Sarasota County Public Safety Communications**

Sally Lawrence, E911 Coordinator with Sarasota County, has been working Public Safety since joining the Military Police Corps in 1984. She made the jump to 911 in 1992 becoming an operator with the Lakeland Police Department and working her way through the ranks to include trainer, supervisor, County 911 Training Coordinator, 911 Addressing Coordinator and 911 Systems Manager with Polk County. As the Systems Manager, Sally oversaw a robust Public Safety Information Technology and GIS system. During her 14 years as a Coordinator, she has also served as the Chair of the State of Florida's Coordinator's group and Legislative Liaison for Florida NENA and has instructed at 911 Coordinator Bootcamp. Sally moved to Sarasota County in 2017 to explore technology and to continue her career closer to the beach.

**Tad McGalliard, Director for Research, Development, and Technical Assistance, IBM Center for the Business of Government**

Tad McGalliard serves as ICMA's director for research, development, and technical assistance with the International City/County Management Association. For the past 18 years, Tad has led programs, projects, and research on creating more sustainable and resilient communities. Prior to ICMA he worked with Cornell University's Center for the Environment.

**Paul Noel, Chief, Knoxville, TN Police Department (as of June 2022), former Deputy Superintendent, Investigation & Support Bureau, New Orleans Police Department**

Paul took on his new role as the Chief of the Knoxville, TN, Police Department in June, 2022. Prior to this, Paul served as the Deputy Superintendent in the Investigation & Support Bureau of the New Orleans Police Department. Prior to that position, Paul served as Deputy Superintendent in the Field Operations Bureau for the New Orleans Police Department. Paul Noel earned a bachelor's degree in Criminal Justice/Safety Studies and Master of Arts in Criminal Justice/Law Enforcement Administration from Loyola University New Orleans.

**Shannon Scully, Senior Advisor, Justice & Crisis Response Policy, National Alliance on Mental Illness**

Shannon Scully is the Senior Advisor for Justice and Crisis Response Policy at NAMI, where she serves as a subject matter expert, providing strategic guidance across the organization regarding NAMI's criminal justice, diversion and crisis response policy. She works closely with key federal agencies and Congress to advance NAMI's priorities and supports leaders across the NAMI Alliance to increase their impact on local and state policies. Prior to joining NAMI, Ms. Scully worked for several other national non-profit organizations on various justice related issues. She began her criminal justice career supporting victims of crime in the county courts in Cook County, IL. Ms. Scully holds a bachelor's degree from the College of St. Benedict, and a Master of Public Policy from American University.

**Susan Shah, Managing Director, Trinity Church Wall Street**

Susan Shah serves as the Managing Director for the Racial Justice Initiative with Trinity Church Wall Street Philanthropies. In this role, she oversees the philanthropic strategy, execution, and partnerships for the initiative. Susan is an experienced lawyer, public health professional, and policymaker in the areas of criminal justice, immigrant rights, and immigrant health. She was previously at the Vera Institute of Justice for over a decade and served in a number of roles, her final being the Director of



Programs and Strategy. In this role, she led the national organization with 200+ staff in partnering with local, state, and federal government officials to ensure that justice systems protect human dignity and strengthen communities. Prior to joining Vera, Susan ran immigrant health programs in NYC and practiced immigration law. Susan earned her BA in journalism from Drake University, an MPH from Tufts University, and a JD from Northeastern University School of Law.

**Cornelia Sigworth**, *Supervisory Program Manager (Associate Deputy Director), Bureau of Justice Assistance*

Cornelia Sigworth currently serves as the Associate Deputy Director with the US Department of Justice's Bureau of Justice Assistance, a post she has held since July 2014. In this capacity, Ms. Sigworth directs the BJA's law enforcement team including its partnerships with local, state, and national policymakers and their efforts to combat crime and reform the criminal justice system. Ms. Sigworth previously served in a variety of capacities within BJA including most recently as the Senior Advisor to the Deputy Director for Policy and Director of the Violence Reduction Network. Ms. Sigworth began her career with The Department at the National Institute of Justice, where she managed national research, evaluation, and program development. Ms. Sigworth holds a bachelor's degree from Northern Arizona University and a M.S. in Justice, Law, and Society from American University. She is a graduate of the Department of Justice's Leadership Excellence and Achievement Program and is a recipient of the Assistant Attorney General's Dedicated Service Award.

**Evonne Silva**, *Senior Director, Criminal Justice, Code for America*

Evonne is the Senior Program Director of Criminal Justice, where she leads a team that works alongside communities and government to transform the way services are delivered to those impacted by the criminal legal system. Most recently, Evonne held leadership positions with the ACLU of Northern California, as a legal advisor, building and leading teams, driving process improvement and systems changes, and managing complex, collaborative projects. She has successfully designed and led policy advocacy campaigns across a range of issues with cross-sector stakeholders at several nonprofit advocacy and legal organizations. Evonne is a licensed attorney who holds a Juris Doctorate from UCLA School of Law and a bachelor's degree in politics and economics from Saint Mary's College of California. She also serves as board member of CORO of Northern California and taught legal ethics at U.C. Berkeley School of Law.

**Anise Vance**, *Assistant Director, Community Safety, Durham, North Carolina*

Anise Vance serves as the Open Data Program Manager for the City and County of Durham. Previously, he was the Senior Manager of Research in Race and Equity at the Boston Foundation. He holds an M.Phil. in Geography from Queen's University Belfast, an MFA in Creative Writing from Rutgers University, and a B.A. from Dartmouth College.

**Ken Zimmerman**, *Founder and Co-Director, Mental Health Strategic Impact Initiative (S2i)*

Ken Zimmerman is founder and co-director of the Mental Health Strategic Impact Initiative (S2i). He is also a Distinguished Fellow at NYU's Furman Center and a Distinguished Fellow at the Jed Foundation. Previously, he served as director of U.S. programs for the Open Society Foundations and in the Obama and Clinton administrations. Previously, he served as a member of the Obama Administration's HUD transition team as Senior Advisor to HUD Secretary Shaun Donovan. In addition, he was a litigation partner for the pro bono practice group at Lowenstein Sandler, Chief Counsel to New Jersey Governor Jon Corzine, and founding Executive Director of the New Jersey Institute of Social Justice. A graduate of Yale and Harvard Law School, Ken also serves as a Distinguished Fellow at the NYU Furman Center and teaches at NYU's Wagner Graduate School of Public Service.

## Research Delegates

### **Roseanna Ander**, *Executive Director, University of Chicago Crime Lab and Education Lab*

Roseanna Ander serves as the founding Executive Director of the University of Chicago Crime Lab (since 2008) and the University of Chicago Education Lab (since 2011) with offices in Chicago and New York, which work to design, test, and scale data-driven programs and practices that improve the public sector's approach to public safety and education. Since their inception, Ander has led the Crime Lab and Education Lab's efforts on violence prevention, criminal justice reform, and improved educational outcomes in Chicago, New York, and around the nation. Ander also helped launch the University of Chicago Urban Labs network, with the creation of three new, independently run labs focused on poverty, health, and the environment. Ander was also key to navigating police training and reform efforts within the Chicago Police Department (CPD), including the Crime Lab's study of CPD's Officer Support System: a first-of-its-kind, data-driven early intervention system that flags officer at risk for adverse events and provides training and support to help avert tragic incidents between police and residents before they occur.

### **Ayesha Delany-Brumsey**, *Director, Behavioral Health, The Council of State Governments*

Dr. Ayesha Delany-Brumsey oversees the Behavioral Health Division and its various portfolios, which focus on how parts of the criminal justice system intersect with the mental health, substance addiction, and homelessness systems, among others. Before joining the organization, Ayesha was most recently the director of Behavioral Health Research and Programming at the Mayor's Office of Criminal Justice in New York City. Prior to that, she was the director of the Substance Use and Mental Health program at the Vera Institute. She received her PhD in clinical psychology from the University of California, Los Angeles.

### **Jesse Jannetta**, *Senior Policy Fellow, Justice Policy Center, Urban Institute*

Jesse Jannetta is a senior policy fellow in the Justice Policy Center at the Urban Institute, where he leads projects on prison and jail reentry, community antigang and antiviolenace initiatives, police-community relations, parole and probation supervision, and risk prediction. He is the project director for the Safety and Justice Challenge Innovation Fund, the principal investigator for the Evaluation of Procedural Justice in Probation project, and a member of the leadership team for the Prison Research and Innovation Initiative. He was previously project director for the Transition from Jail to Community initiative, the process and fidelity assessment lead for the evaluation of the National Initiative for Building Community Trust and Justice, and coprincipal investigator for evaluations of the Los Angeles Gang Reduction and Youth Development strategy and the Chicago Violence Reduction Strategy. He applies mixed methods approaches to process and impact evaluations and provides direct technical assistance to jurisdictions improving justice system functioning.

### **David Muhammed**, *Director, The National Institute for Criminal Justice Reform (NICJR)*

David Muhammad is a leader in the fields of criminal justice, violence prevention, and youth development. David is the Executive Director of the National Institute for Criminal Justice Reform (NICJR). David has worked to implement positive youth development into youth justice systems around the country and was the primary author of NICJR's seminal report, A Positive Youth Justice System. For three years, David was extensively involved in developing a detailed reform plan for the Los Angeles County Probation Department, the largest probation department in the country. He also served as the technical assistance provider for the Sierra Health Foundation's Positive Youth Justice Initiative, providing training and consulting to several California probation departments. NICJR is currently serving

as a technical assistance provider to the City and County of San Francisco, working to reform its juvenile justice system and close its juvenile detention center.

## 911 Technology and Infrastructure

### Co-Chairs

#### **Michael Cowden**, *Director of Solutions Engineering, Code for America*

Michael Cowden is the Director of Solutions Engineering at Code for America. He currently works with government stakeholders, and their existing state infrastructure, to find achievable technology and policy solutions for implementing Clean Slate legislation. Prior to joining Code for America, Michael successfully led and developed large software projects across start-ups, Fortune 500 companies and the Federal Government. He holds a degree in Psychology and Computer Science from Towson University and currently resides in Washington, D.C.

#### **Meredith Horowski**, *Senior Director, Network, Code for America (former co-chair)*

Meredith Horowski is the Senior Director for the Code for America Network. Meredith is an experienced campaigner with particular expertise in grassroots organizing and in creating powerful, diverse movements on pressing social issues. Prior to joining Code for America, she was the Campaign Manager for a 2018 gubernatorial campaign in Rhode Island. As an independent consultant, she led US strategy for the civic tech firm New/Mode and provided strategic support to NetChange Consulting. Meredith founded Beyond the Bomb—a grassroots organization to end systems of nuclear violence. She also served for four years as the Global Campaign Director at Global Zero, where she spearheaded GZ's international advocacy strategy, creative campaigns, and public mobilization. She's written for outlets including Teen Vogue, The Nation, and Huffington Post.

#### **Evonne Silva**, *Senior Director, Criminal Justice, Code for America*

Evonne is the Senior Program Director of Criminal Justice, where she leads a team that works alongside communities and government to transform the way services are delivered to those impacted by the criminal legal system. Most recently, Evonne held leadership positions with the ACLU of Northern California, as a legal advisor, building and leading teams, driving process improvement and systems changes, and managing complex, collaborative projects. She has successfully designed and led policy advocacy campaigns across a range of issues with cross-sector stakeholders at several nonprofit advocacy and legal organizations. Evonne is a licensed attorney who holds a Juris Doctorate from UCLA School of Law and a bachelor's degree in politics and economics from Saint Mary's College of California. She also serves as board member of CORO of Northern California and taught legal ethics at U.C. Berkeley School of Law.

### Members

#### **Jim Bueermann**, *Retired President, National Police Foundation*

Chief Jim Bueermann (Ret.) has spent more than 40 years in policing. From 1978 to 2011 he was a member of the Redlands (CA) Police Department, where he served in every unit within the department. In his last 13 years with the department, he was the Chief of Police and Director of Housing, Recreation and Senior Services. He directed the implementation and strategic development of community policing in Redlands which included directing the consolidation of Housing, Recreation and Senior Services into the police department as a risk and preventative factor strategy for reducing crime and adolescent problem behavior. In 2000, this effort was recognized by the Innovations in American Government

Award program (Harvard's Kennedy School) as one of the 25 most innovative governmental programs in America. After his retirement in 2011 he worked for a year for the USDOJ, National Institute of Justice as an Executive Fellow.

**Brian Dunkle, *Regional Sales Manager, Deccan International***

Accomplished executive with a sales and management background in multiple governmental and commercial industries. A recognized ability to enhance and revitalize a division, company, or organization through the identification of new market opportunities utilizing existing products or organizational skill sets. A verifiable track record of building territories, increasing sales, and implementing operational improvements to increase productivity and reduce operating costs.

**Christine Gardiner, *Professor of Criminal Justice, California State University, Fullerton***

Christie Gardiner is a Professor of Criminal Justice at California State University, Fullerton, and a Senior Research Fellow for the Police Foundation, as well as a member of CSUF-PD Chief's Advisory Board. She is a certified Crime and Intelligence Analyst with prior work experience as a sheriff's department crime analyst, a police dispatcher, a police explorer, and an intern probation officer. Her fields of expertise include policing and crime policy. She has conducted two major studies on the role of higher education in policing – one in California, the other National – as well as studies on public opinions of police and crime policies and a variety of research projects for local agencies. She has edited multiple books and authored numerous articles, book chapters, and an introduction to policing textbook (Policing for the 21st Century: Realizing the Vision of Police in a Free Society).

**Ben Horwitz, *Co-Founder, AH Datalytics***

Ben is a nationally recognized expert in data-driven policy management and criminal justice data systems. Ben's work has been instrumental in analyzing organizational problems, evaluating possible solutions, and building data-driven organizations. Before launching AH Datalytics, Ben worked as the Director of Analytics for the New Orleans Police Department, where he instituted a crime analyst unit and implemented the nationally recognized Management Analytics for Excellence (MAX). This platform assists in optimizing police management in the areas of crime, community policing, consent decree compliance, and much more. Ben's influential collaborations have been with the U.S. Department of Justice, National Police Foundation, Ferguson Missouri Police Department, Puerto Rico Police Bureau, the Baltimore Police Department, and others. Ben has a master's degree in Public Policy and Management from Carnegie Mellon University that specializes in the intersection of data, information systems, and public policy. Ben holds a Bachelor of Arts from American University.

**Jerry Hall, *Founder, Civic Mapping***

Jerry Hall is a serial entrepreneur currently focused on improving meaningful informed-stakeholder engagement at the intersections of the criminal-legal and behavioral health systems. Jerry served on the San Diego County Behavioral Health Advisory Board for five years and blogs about improving behavioral health stakeholder engagement. Jerry advocates for open and transparent government, especially in the areas of public records and data access. He has served in multiple capacities in community elected and other civic boards, commissions, and workgroups. Jerry is also a CalVoices ACCESS Ambassador advocating from a lived-experience trauma-informed perspective for those released from incarceration while also experiencing mental health and substance use disorder issues.

**Billy Lim, *Former Senior Organizer, Code for America***

Billy is a Senior Organizer at Code for America. From a career in civic organizing, political campaigns, and leadership development, he holds deep conviction in the potential of government to support the

flourishing of everyday people and the role of grassroots, people-powered movements to effect and reflect the world of our dreams. An advocate for equity in public service for Asian Americans and ally communities, Billy serves as Chair Emeritus of the Board of Directors for the Conference on Asian Pacific American Leadership (CAPAL). He is a proud son of Cambodian refugees and was born and raised in Milwaukee, Wisconsin. He holds a Bachelor of Arts degree in American Studies from Yale University, where he was a recipient of the Mellon Mays & President's Public Service fellowships.

**Kevin Miller**, *Director of Strategic Partnerships, Microsoft Justice Reform Initiative*

Kevin Miller is the Director of Strategic Partnerships for Microsoft's Justice Reform Initiative. In this capacity, Kevin leads grantmaking strategy and manages Microsoft's engagement with justice reform organizations and justice system stakeholders across the US, working toward improved racial equity in the criminal legal system. Before joining the Justice Reform Initiative, Kevin leads national and local partnerships at Microsoft designed to bring technology and data to bear on social issues facing US cities. Prior to Microsoft, he held various roles across the public and nonprofit sector at the intersection of technology and social impact. Kevin holds a BA in political science from UC Berkeley and Master of Public Policy degree from American University.

**Micah Mutrux**, *911 National Action Team Program Manager, Code for America*

Micah currently serves as 911 National Action Team Program Manager for Code for America where they assist in establishing and leading Code for America's first National Action Team, focused on reimagining 911 emergency response. In the past, Micah was a fellow for Aspen Tech Policy Hub and Volunteer Team Lead for U.S. Digital Response. Micah earned a bachelor's degree in Computer Science from Marlboro College and completed a certificate of Project Leadership and Management and Business Management from Cornell University.

**Katherine B. Nammacher**, *Product Manager, User Researcher & Professor*

Katherine B. Nammacher teaches at Georgetown's McCourt School of Public Policy. As a product manager, she is focused on ensuring that product execution is aligned with strategic goals and user needs – whether in the classroom or on product teams. She's worked at VMware and the U.S. Digital Service. Previously, she was the CEO & Co-Founder of RideAlong, a govtech startup at the intersection of policing and mental health. She led RideAlong from its start through successful acquisition, including spinning it out from a Code for America fellowship and garnering investment from Y Combinator.

**Jesse Niwa**, *Deployment Engineer, SPIDR*

**George Rice**, *Managing Partner, SkyHawk Global*

George Rice is a Managing Partner at Skyhawk Global Associates. He has a diverse background covering 35 years in public service and global engagement. He is a former American enforcement and intelligence agent and has headed a series of programs and organizations directed at public sector and emergency services efforts, with a focus on the technologies that enhance these vital interests. He is the former Executive Director of the Association of Public-Safety Communications Officials (APCO) International and the Industry Council for Emergency Response Technologies (iCERT), leading both organizations into significant growth periods.

**Scott Sobotka**, *Primary Consultant, Pragmatica, LLC*

Scott currently serves as Primary Consultant for Pragmatica where they develop software with a specialization in law enforcement, criminal justice, and corrections at all levels of government. Prior to this position, Scott was Senior Software Engineer for NetPro Computing where they developed system monitoring and administration tools for Netware and Active Directory. In the past, Scott has worked for Hypercom Network Systems as a Software Developer and developed network administration applications for Hypercom's line of network devices.

**Sema Taheri**, *Director of Research Operations, Measures for Justice*

Sema Taheri is the Director of Research & Strategic Initiatives at Measures for Justice. In her role, Sema collaborates with the Engagement team to develop MFJ's data collection protocol, co-manages the development and implementation of a rigorous methodology for data management, and directs the general operations of the Research team. She also collaborates closely with MFJ's leadership to advance the organization's research agenda. Sema has worked closely with practitioners across the system on projects related to data standards, performance measure development, and evaluation. Sema holds a Ph.D. in Criminology & Justice Policy from Northeastern University and a M.A. in Criminology & Criminal Justice from Loyola University Chicago. Her research interests include understanding the research and practice gap and the development of partnerships to guide data-led policy, institutional and community corrections, offender reentry, CJ organizations, and program evaluation.

## Research Delegates

**Loren Atherley**, *Director of Performance Analytics & Research, Seattle Police Department*

Loren currently serves as Director of Performance Analytics & Research for the Seattle Police Department. As a Director for the Seattle Police Department, Loren manages three complimentary programs (Research, Data Warehousing and Data Governance) to discover new insights, develop new methods and operationalize those findings to improve the delivery of police services. Prior to this position, Loren was an adjunct Professor of Criminal Justice at Seattle University. Loren earned a Bachelor of Arts in Political Science and Master of Arts in Criminal Justice from Seattle University. Loren is currently pursuing a PhD in Criminology at the University of Cambridge.

**Jake Cramer**, *Senior Researcher, Policing Analytics and Strategy, RTI International*

Dr. Jake Cramer is a Senior Policing Researcher with RTI International, where he supports multiple privately and federally funded projects focused on improving police responses to 911 calls for service, use of force data collection and reporting, and improving the national use of NIBRS data. Prior to joining RTI, Dr. Cramer served as the Analysis Administrator the Tucson Police Department, where he was responsible for creating and leading the Analysis Division. As administrator, he was recognized for his work with multiple state and national awards, including an Arizona Innovator Award, the 40 Under 40 Award by IACP, and was the first civilian to be selected by NIJ to be a LEADS fellow. Dr. Cramer has more than 10 years of experience, and received his Ph.D., and M.A., from the University of Arizona, and received his B.A., from Syracuse University.

**Robin Engel**, *Professor of Criminal Justice, University of Cincinnati*

Dr. Robin S. Engel is a Professor of Criminal Justice at the University of Cincinnati. She also serves as the Director of the International Association of Chiefs of Police (IACP)/UC Center for Police Research and Policy. Dr. Engel engages in research and evaluation in the field of criminal justice and works directly with practitioners to implement evidence-based strategies and best practices. Dr. Engel's work includes



establishing academic-practitioner partnerships in policing, with expertise in empirical assessments of police behavior, police use of force, police-minority relations, police supervision and management, criminal justice policies, criminal gangs, and crime reduction strategies. She has served as the Principal Investigator for over 80 contracts and grants, and has provided statistical and policy consulting for international, state, and municipal law enforcement agencies. She teaches in the areas of policing and criminal justice.

**Dave McClure, Senior Principal, Police Executive Research Forum**

Dave McClure is a Senior Principal at the Police Executive Research Forum (PERF) in Washington, D.C. For more than 15 years Dave has been working in different research, policy, and practice settings to improve the effectiveness and efficiency of justice systems through empirical research, science, data, and technology. Prior to joining PERF in 2019, Dave was a Research Associate in the Urban Institute's Justice Policy Center, where he worked on different aspects of police body-worn cameras, DNA and other forensic sciences, open data from police and other government agencies, the opioid crisis, evidence-based smartphone applications, and many other topics involving science, data, and technology in the justice system. Dave earned his undergraduate degrees from the University of Georgia and his M.A. and Ph.D. from George Mason University. Dave has served as a member of Integrated Justice Information System Institute's Information Technology and Architecture Committee since 2015.

## **TRANSFORM911 Virtual Roundtable Planning Survey Approach and Findings**

### **Introduction**

911 in the United States works off of a patchwork of often underfunded and underperforming technology. Riddled with bias particularly toward Black communities and more broadly, people of color, the system suffers from a dearth of standardized practices that could mitigate the harms it currently perpetuates. In order to generate best practices around emergency response, it is crucial to amass existing data and knowledge on 911 as well as create tools to continue building the evidence-base. TRANSFORM911 seeks to begin this process with three interrelated workstreams: (1) creating a community of practice and national dialogue; (2) launching and maintaining a centralized TRANSFORM911 website; and (3) producing and disseminating interactive reports and recommendations to improve 911. Through this work, we endeavor to collaborate with fellow 911 experts and stakeholders to create community and historically informed, data-supported recommendations for policymakers, practitioners, researchers, funders, and technologists in addition to integrating dispatch reform into the broader national dialogue about police and criminal justice reform.

In order to forge this community of practice, we are undertaking the crucial step of facilitating discussion about 911 across disciplines and geographies using the format of a virtual roundtable. From the roundtable, we hope to generate a comprehensive set of best practices for call-taking, data collection, dispatch and response, develop an understanding of outstanding research questions and build a shared sense of investment in bettering our national emergency response system. In the planning, we have included researchers, practitioners, and consultants from a number of institutions, including Harvard, UCLA, Temple University, RTI International, and NYU School of Law.

In collaboration with our T911 planning partners, we determined it would be prudent to survey fellow emergency crisis response stakeholders to understand the most pressing issues in their fields and invite their participation on the project. To determine the individuals to whom we would send the survey, we compiled a list of Health Lab and our partner organization's connections to academics, journalists, 911 communications personnel, law enforcement professionals, government officials, technologists and advocates involved in the world of 911. Then, we reviewed their work from the past decade to determine which individuals might have the most insight into the greatest challenges and questions relating to 911. After choosing equivalent numbers of professionals from each discipline (law enforcement, government, academia, etc.), we sent out the survey. We also asked the people to whom we sent the form to recommend other individuals they thought could provide insight and sent it to them as well.

### **Survey Description**

The survey, developed by Health Lab with consultation from our T911 partners, is broken down into three sections: Introductory Questions, Roundtable Programming and Logistics. The survey was developed in Google Forms and is quite short. It was designed to be completed in about five minutes. The first section requests people's names, institutional affiliations, whether they are responding as individuals or on behalf of their organization and their fields. Roundtable Programming offers the planning committee's initial thoughts on the question areas the roundtable should address (the technological infrastructure of 911, governance and dispatch procedures, 911 call-taking procedures, the development of viable alternatives, and examining and understanding model practices), and solicits

feedback regarding other subject areas that might be important to discuss. Roundtable Programming also requests additional contacts of people that could be valuable contributors to the roundtable and lists 911 and specifically alternative response related topics, asking survey-takers to check which areas are most important to them. The logistics section asks people for their desired level of participation in the roundtable as well as when they think it should be held. The full survey is contained in the appendix.

### Summary

- 102 people responded from fields including law enforcement, academia and media.
- There was notable enthusiasm for discussing alternatives to police response and call-taker training.
- Roundtable topics of greatest interest were: 911 History, Call-Taking and Dispatching Procedures, 911 vs. 211 vs. 311 vs. 988, Collecting 911 Data, Research and 911, International Emergency Response Efforts.
- About half of responders indicated sustained interest by volunteering to join working groups.
- The majority of responders want the roundtable to be held as a series of meetings over multiple months starting in the second quarter.

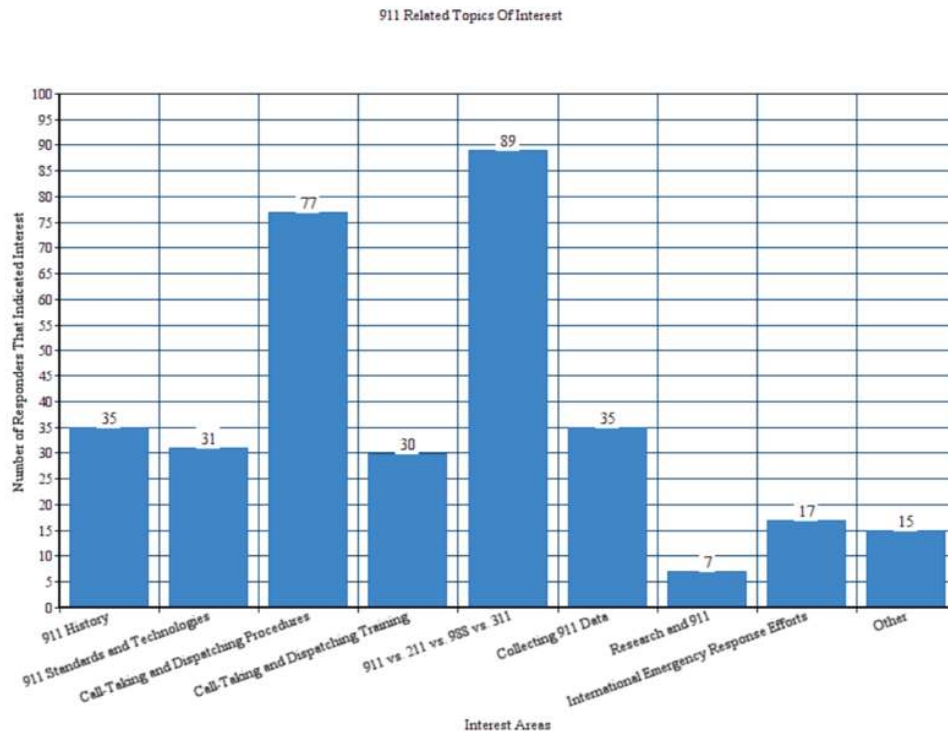
### Introductory Questions

102 individuals from disciplines including but not limited to 911 communications, academia, advocacy, consulting, emergency medicine, government, grassroots community organization and fire responded to the survey. 63.1% of responders answered on behalf of themselves rather than their organizations. There was almost no overlap with regards to institutional affiliation.

### Roundtable Programming:

We presented the roundtable as being structured to address the issue areas listed above under “Survey Description.” Responders generally agreed with these priority areas, stating that topics of particular interest were the staffing and training of 911 dispatchers and dispatch alternatives. A few individuals also mentioned that discussing cost and funding related to implementation would be helpful.

Additional reform areas people said they faced frequently in their professional roles were issues around data collection, prevention/diversion, connecting with communities, offering continuous care, accessibility issues relating to 911, public education about how and when to use 911 and call-taker mental health. When asked what topics people wanted to see integrated into the roundtable, responders overwhelmingly said 911 History, Call-Taking and Dispatching Procedures, 911 vs. 211 vs. 311 vs. 988, Collecting 911 Data, Research and 911 and International Emergency Response Efforts.

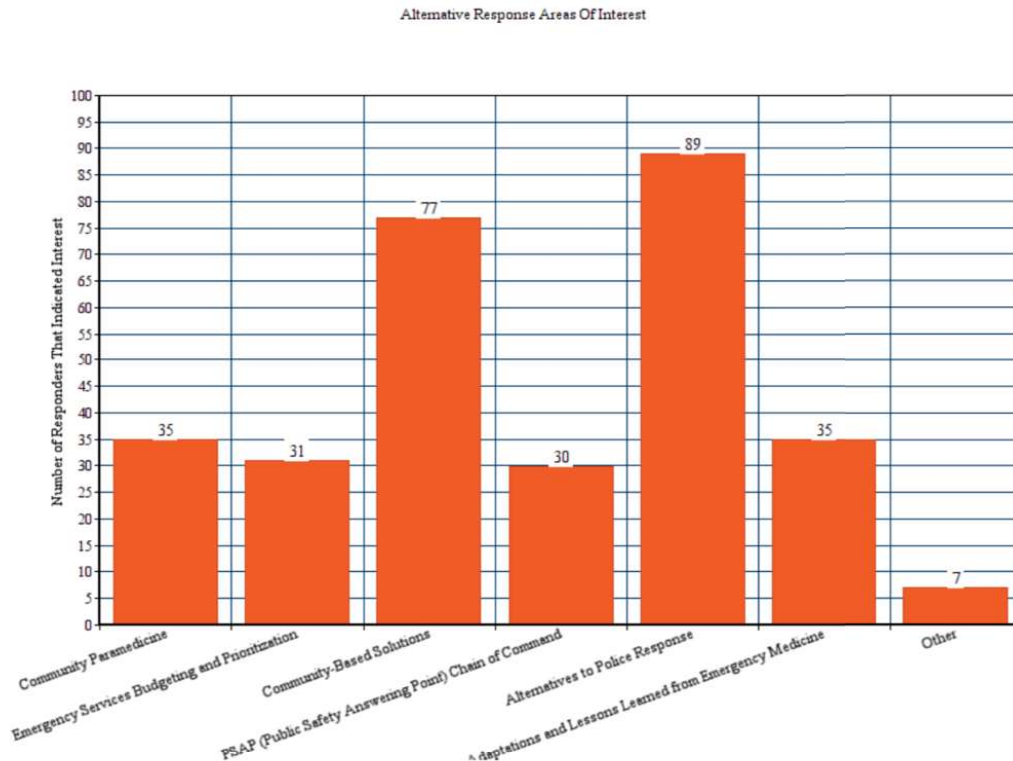


Synthesizing responders' interest in the above topics and integrating industries that would allow for the implementation of reforms, we have developed a tentative roundtable structure that involves six tracks, four content-based and two industry-related: 911 History, 911 Data and Research, Call-Taking and Dispatching Procedures, Alternative Response, Philanthropy and Advocacy.

911 History will include an overview of how the 911 emergency response system developed as well as the implementation of alternative numbers like 211, 311 and 988. 911 Data and Research will rely most heavily on technologists and academics and involve discussion of identifying and collecting crucial emergency response data as well as determining the most pressing outstanding research questions in the world of 911. Call-Taking and Dispatching Procedures will cover dispatcher training, call-taking protocol and dispatch chain-of-command. Alternative Response will encompass existing and potential non-law-enforcement emergency response strategies. Technologists will encompass NG911, best practices for data collection and call patterns. In the Philanthropists track, participants will discuss how the philanthropy community can best encourage deeper public investment in 911, and in the Advocacy track, community members, academics and law enforcement will collaboratively develop blueprints and determine the path toward implementation.

Looking more closely at the area of Alternative Response, survey-takers indicated they were most interested in discussing Community-Based Solutions and Alternatives to Police Response generally, but they also showed interest in Community Paramedicine, Emergency Services Budgeting and Prioritization, Adaptations and Lessons Learned from Emergency Medicine and PSAP Challenges. The models or best practices people wanted to see highlighted and reviewed in the convening included mental health

transfer programs, CAHOOTS/STAR, any existing national 911 standards and embedding healthcare professionals into PSAPs. It should be noted there was disproportionate interest in CAHOOTS.



With regards to additional experts of organizations responders wanted included in the roundtable, the ones that appeared most frequently were NENA, APCO, NANSAs, LEAP, NAMI, LCCHR, CAHOOTS and technology/software companies. There were also an assortment of community-based organizations to which we will reach out. We look forward to integrating these stakeholders in the tracks most relevant to their work. We will also conduct a series of one-on-one interviews with survey responders to identify additional key stakeholders within each track and ensure their participation in the project. In order to fully capitalize on stakeholders' expertise and enthusiasm for the work, each track will have a working group answering an overarching question developed as a collaboration between AV, Health Lab and the group itself.

### Logistics:

Responders showed great enthusiasm for the roundtable, with the vast majority indicating they would like to be involved. More than half (roughly 50 people) noted they would like to join a working group, and about 15% said they would like to present their current work or research. Even those that did not offer to join a working group or present were eager to participate, with about 80% of responders saying they would be willing to at least attend the roundtable. Some responders mentioned they were unusually burdened as a result of the pandemic and could not commit to participating as a result, so depending on how the pandemic develops, a few additional people may be able to join. Creating working groups will be a collaborative effort between the Planning Committee (Health Lab, Crime Lab,

RTI, NYU Policing Project, Arnold Ventures, Microsoft, etc.) and working group participants, and determining group subject areas will be partially determined by the roundtable tracked (informed by issues said to be most pressing in the survey) and working group leads' expertise. Working group deliverables will similarly be determined as a collaboration between the Planning Committee and working group participants.

The significant number of people willing to join working groups along with the clear preference to hold the roundtable as several meetings over the course of a few months (about 70% of responders preferred this structure as opposed to a more consolidated conference) clarifies the optimal roundtable structure. To appease those that wanted the more consolidated, 1-2 week timespan and also adhere to the group preference for a more spread out timeline, we propose holding several large introductory meetings during which working groups could meet and develop workplans that could be executed over the following months.

Follow-up meetings could serve as interim check-ins for the working groups as well as vehicles for furthering the conversation. In order to generate enthusiasm for the work as well as inform the working group's plans, the introductory meetings would ideally be open to the public. Community members could offer their insight into the most pressing needs in their respective communities as well as gain a feeling of agency and investment with regards to emergency response. With regards to when the first meetings should be held, the majority of survey takers indicated they would prefer the roundtable to take place in the second quarter of 2021 (about half), while a quarter indicated a preference for the third quarter. Given responders' preferences and the reality that holding comprehensive programming within the first quarter may not be feasible logistically, we believe roundtable meetings should begin in April and end in July/August.

With regards to additional thoughts responders had around the roundtable, multiple people indicated they wanted a clearer sense of what their roles and duties would be. Once the details of the roundtable are finalized, all potential participants will be notified and encouraged to choose a role within the determined programming. Responders mentioned the importance of community involvement. Already something we are prioritizing, highlighting diverse voices will remain an area of great importance. Also, several individuals mentioned having this conversation in person would be more effective, we do not think that is an option at this time, given the state of the pandemic and our budgeting. We will capitalize on the advantages holding a virtual conversation offers and attempt to compensate for any of the challenges that arise.

#### **Next Steps:**

To ensure we have complete information, we are conducting intentional outreach with individuals from sectors that were underrepresented among responders. We are excited to share our findings with our partners to establish next steps.



# TRANSFORM911 Survey for Colleagues

Valued colleagues, the University of Chicago's Health Lab, along with partners, are organizing a virtual national roundtable convening to discuss and explore solutions to the most pressing issues in the world of 911 emergency response. With the roundtable and subsequent efforts, we aim to evaluate the evidence base surrounding the current 911 system, spark innovation in alternative approaches to its use, develop explicit policy recommendations, and build blueprints and implementation plans to achieve systemic change.

In addition to inviting you to participate in the conversation, we seek your insight, as experts, into the most pressing needs in your field. Your responses will help shape our programming. We kindly ask that you respond to this survey by February 8, 2021. Thank you in advance for your insights. Please feel free to contact us with any questions, suggestions, or requests.

## Survey

### Introductory Questions

1. What is your name?

---

2. What is your institutional or organizational affiliation?

---

3. If you would like to share your contact information, please provide your email address and/or phone number below.

---

4. Are you answering this survey on behalf of yourself or your organization (i.e. the sole representative of your organization)?

*Mark only one oval.*

- ☐ Myself
- ☐ My organization

5. Please select your field

*Mark only one oval.*

- ☐ 911 Communications
- ☐ Academia
- ☐ Advocacy
- ☐ Consulting
- ☐ Emergency Medicine
- ☐ Government (other than First Response)
- ☐ Grassroots Community Organization
- ☐ Fire
- ☐ Law Enforcement/Police
- ☐ Media
- ☐ Philanthropy
- ☐ Research
- ☐ Technology
- ☐ Other: \_\_\_\_\_

**Roundtable Programming**

6. Currently, we see this roundtable addressing questions related to (1) the technological infrastructure of 911, (2) governance and dispatch procedures, (3) 911 call-taking procedures, (4) the development of viable alternatives, and (5) examining and understanding model practices. Are there any subject areas that you would like to see added?

---

7. What are the specific issues or reform areas you face most frequently in your professional role and believe are most critical?

---

---

---

---

---

8. Which of the following 911 related topics would you like to see incorporated into the roundtable? Check all that apply.

*Check all that apply.*

- ☐ 911 History
- ☐ 911 Standards and Technologies
- ☐ Call-Taking and Dispatching Procedures
- ☐ Call-Taking and Dispatching Training
- ☐ 911 vs. 211 vs. 311 vs. 988
- ☐ Collecting 911 Data
- ☐ Research and 911
- ☐ International Emergency Response Efforts

Other: ☐ \_\_\_\_\_

9. Which of the following alternative crisis response related topics would you like to see incorporated into the roundtable? Check all that apply.

*Check all that apply.*

- ☐ Community Paramedicine
- ☐ Emergency Services Budgeting and Prioritization
- ☐ Community-Based Solutions
- ☐ PSAP (Public Safety Answering Point) Chain of Command
- ☐ Alternatives to Police Response
- ☐ Adaptations and Lessons Learned from Emergency Medicine

Other: ☐ \_\_\_\_\_

10. Are there any key experts or organizations you would like to see represented in the convening?

\_\_\_\_\_

11. Are there any models or best practices you would like to see highlighted or reviewed during the convening?

\_\_\_\_\_

## Logistics

12. How would you like to be involved? Check all that apply.

*Check all that apply.*

- ☐ Join a working group
- ☐ Listen and learn
- ☐ Present current work/research

Other: ☐ \_\_\_\_\_

13. Do you think the roundtable should be held over a 1-2 week period or as a series of conversations over several months?

*Mark only one oval.*

- ☐ One-time, over 1-2 weeks
- ☐ Several meetings over the course of a few months
- ☐ Other: \_\_\_\_\_

14. If you'd like to see it happen over a 1-2 week timespan, when would you like the roundtable to take place?

*Mark only one oval.*

- ☐ First quarter of 2021
- ☐ Second quarter of 2021
- ☐ Third Quarter of 2021
- ☐ Fourth Quarter of 2021
- ☐ Other: \_\_\_\_\_

15. Is there anything else you would like us to consider with regards to the planning and facilitation of the roundtable?

---

---

---

---

---

16. If you would like to recommend any colleagues we should contact, please share their name(s), email address(es), and/or phone number(s) here.

---

---

---

---

---

---

This content is neither created nor endorsed by Google.

Google Forms



**Appendix D: Draft Recommendations by Workgroup for Public Comment**

*Workgroup recommendations as of February 28, 2022*

**911 Professional Career and Supports**

1. Ensure recognition of 911 professionals as public safety professionals
2. Reintroduce 911 and 911 professionals to the American public
3. Invest in workforce development and inclusive hiring processes
4. Take active measures to foster the career development and workplace retention of fully successful 911 professionals

**Alternative First Responders**

1. Emphasize trauma-informed, culturally-sensitive, person-centered response
2. Collect data to understand needs, iterate on progress, and support accountability
3. Build toward sustainable positive outcomes for everyone involved in the system
4. Create community-led accountability to support desired impact

**911 Hotline Alternatives**

1. Center the voices of those who have experienced unintentional harm or trauma by the emergency response system
2. Foster a robust, well-marketed, and transparent ecosystem of alternative hotline options, including those both directly connected or not to centralized emergency response centers
3. Identify 911 emergency calls-for-service that could be safely transferred to alternative hotlines through community engagement, services gap analysis and law enforcement data analysis
4. Develop alternative hotlines that can provide immediate access to, and robust knowledge of, available resources that offer personalized supports
5. Ensure viable alternative hotlines are cost-free, widely accessible, technology driven, and able to support high call volumes 24/7

**Emergency Communications Center (ECC) Operations**

1. Ensure ECCs are independent agencies and not subordinate to peer agencies (fire, police, and EMS)
2. Ensure governing authorities and boards that control emergency communications centers are representative of the community they serve
3. Require ECCs to offer all advanced services, including text-to-911 and enhanced location data, required by the i3 standards – particularly for people with disabilities and people whose first language is not English
4. Formally recognize emergency communication professionals as public safety responders at the local, state, and federal levels
5. Ensure state statutes require communication interoperability among fire, police, EMS, and alternative responders
6. Develop a credentialing process for technology vendors to apply and demonstrate compliance with all American National Standards Institute standards
7. Legislate a national minimum training standard for emergency communication professionals

**911 Governance**

1. Establish a high-level federal position and cabinet-level working group to create and implement national standards for 911
2. Invest 911 professionals and community members with power in governance decisions

3. Establish national and state level standards for how ECCs operate
4. Increase coordination among ECCs and consolidate where possible

## **911 Technology and Infrastructure**

1. Adopt NextGen911 to create more equitable and effective emergency response outcomes
2. Develop a data ethics statement to ensure appropriate and ethical use of personal information in emergency service decision-making
3. Define and implement uniform data standards for call data to enable government transparency, achieve equity, and improve emergency response outcomes
4. Empower and incentivize ECCs with modern tools by using dedicated shared services models and cloud-based services to improve consistency and quality of service
5. Develop an emergency procurement playbook: a living document that helps emergency services professionals navigate the complexities of funding, technology, and operations
6. Require vendors to provide real-time access to call data for reporting and analytics to support continuous improvement

**Appendix E1: Public Feedback on Draft Recommendations – FAQ**

- **Who wrote these recommendations?**
  - All the recommendations were generated collaboratively and iteratively by the Transform911 [workgroup members and chairs](#), staff from the [Full Frame Initiative](#), [Transform911 staff](#), and reactors, who together developed the recommendations through workgroup discussions over several months, conversations with project partners, comments from participants in public meetings, individuals and organizations who provided feedback on draft content, and other reactors.
- **How were workgroup members selected?**
  - Transformation starts with relationship and community, so these workgroups started with a network of connections held by staff and partners. We invited people dedicated to positive change working in a wide array of relevant fields – police chiefs, 911 professionals who are local leaders and members of associations like NASNA, APCO and NENA, nonprofit directors, researchers, city employees, activists, and more.
  - We then asked those people to use their networks and invite anyone who may be interested and able to contribute, and finally each workgroup had a selection process based on availability, commitment, and willingness to work with the group.
- **What was the process for creating recommendations?**
  - Workgroups went through a structured process of exploring their group’s topic, identifying challenges and questions, brainstorming and dreaming for the future, and discussing/vetting ideas. Alongside that process, Transform911’s staff conducted [extensive research into the literature on each topic](#), interviewed [scholars](#), and synthesized comments from the public shared through our website, convenings, and other meetings. Recommendations went through several rounds of revision, with Full Frame Initiative and Transform911 staff doing the final writing and all materials approved by the workgroups.
- **How did you invite people to share feedback?**
  - During our online public convening on March 2-4, we asked for feedback during each workgroup’s session using a tool called Mentimeter. We then posted summaries of each recommendation presented at the convening on our website, and had forms open for feedback on all of them from March 2 – May 1. We pointed people to those forms through our website homepage, several tweets, op eds, emails to our mailing list, and encouraging our project partners to share with their agencies, communities, and friends.
- **How many people shared opinions in total?**
  - Web form entries were allowed to be submitted either anonymously or in identifiable form, and we didn’t have a limit on how many times someone could submit feedback, so it’s possible that the same person filled out forms more than once. The forms on our website received a total of 205 entries. Many of these just included indications of

approval or disapproval for each recommendation, and 80 entries included comments on one or more recommendation.

- Mentimeter responses were also anonymous, so we can share how many people responded to each workgroup, but not how many individuals shared across the entire convening. Seventy (70) unique individuals provided comments through Mentimeter on our Alternative First Responders session, which was the first session of the convening and received the highest volume of comments. Each other session received comments from 20-35 individuals. People also submitted feedback and informal ideas through the Zoom chat, which we recorded and read.
  - We also received email comments and had one-on-one meetings with over 30 people who preferred to share opinions that way.
- **I have an opinion that I don't see reflected here. How comprehensive is this feedback?**
    - The researchers on our team want to emphasize that this is definitely not a representative survey of everyone in America. We did our best to collect feedback from a wide audience with interest and a stake in the 911 field, but we only heard the opinions that people wanted to share. You can email us at [transform911@uchicago.edu](mailto:transform911@uchicago.edu) if you want to share comments at this time.
  - **What are you going to do with all these comments?**

We have carefully reviewed and considered every comment we've received, as well as approval ratings of each recommendation posted on our website. Our team has processed all this information, and each workgroup has worked to integrate and consider feedback in their recommendations. The Blueprint is informed by all feedback we received, to try to ensure that the final recommendations are as comprehensive and informed as possible.
  - **The public comment forms are closed now. Does that mean you're not looking for any more input?**
    - We're always ready to hear more feedback! Even after the Transform911 Blueprint is released on June 29, 2022, we'd love to hear discussion around the recommendations as we collectively move forward to implement positive change. You can also always email us at [transform911@uchicago.edu](mailto:transform911@uchicago.edu) with any questions, concerns, or comments.

## Appendix E2: Visualizing the 2<sup>nd</sup> Transform911 Convening

### Mentimeter Feedback

During each workgroup convening session, workgroup chairs presented a series of recommendations and questions to participants based on each workgroup's focus area. Feedback was collected through Mentimeter (<https://www.mentimeter.com/>), and anonymous text data was recorded<sup>1</sup>.

The analyses presented in this report are intended to provide Transform 911 participants with several ways to begin to wrap their arms around a vast amount of text generated through Mentimeter at the Transform 911 convening. The source text is comprised of comments, opinions, and questions of people who attended the convening. We used two analytic strategies, word clouds and topic modelling, to give participants an initial birds-eye view of participants' feedback. More traditional in-depth qualitative (non-numerical) analyses of the text will be conducted subsequently. A description of word clouds and topic modelling, along with their results, are described below.

### Word Clouds

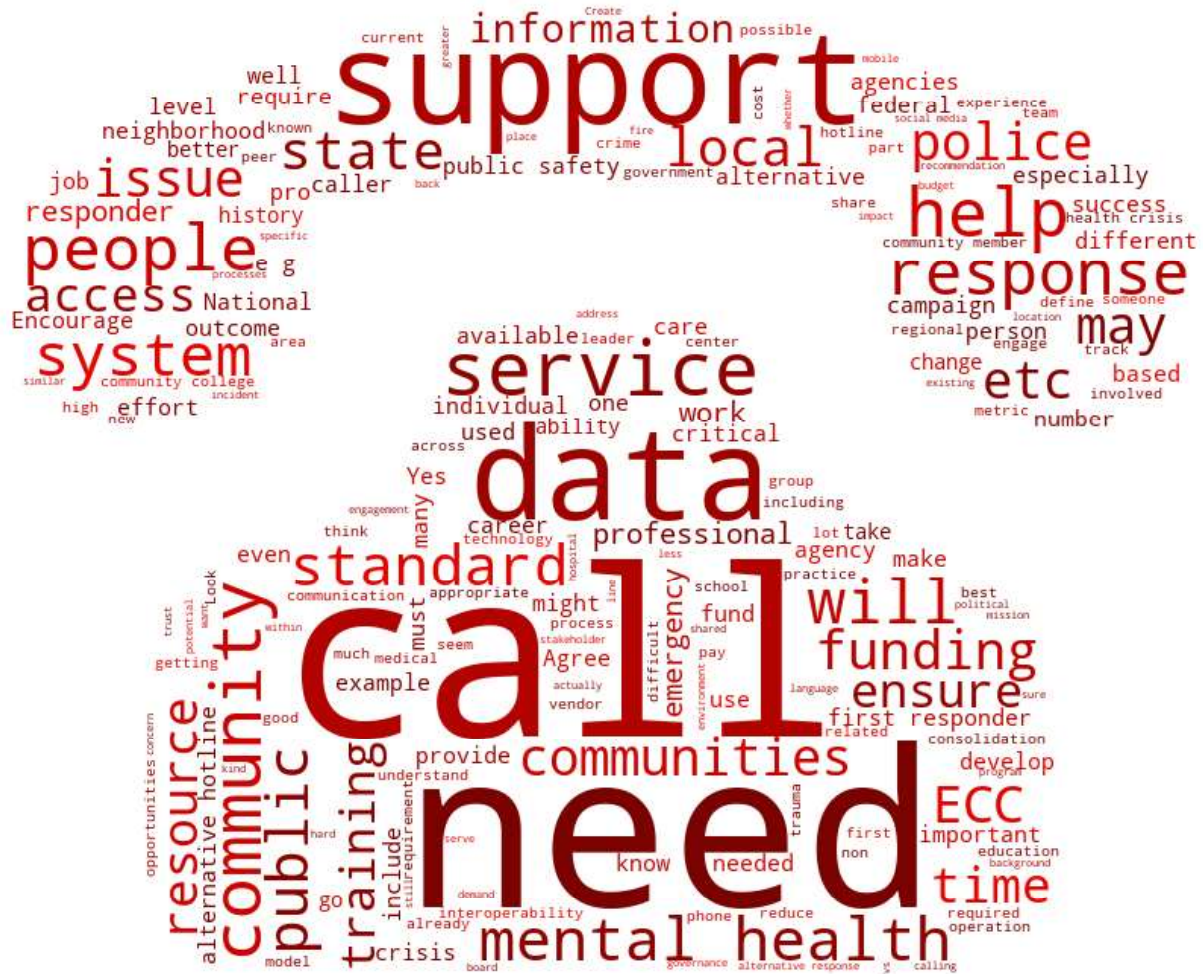
The first analytic strategy used is word clouds, an interesting way of visually representing a body of text. The graphic produced gives greater visual prominence to words that appear more frequently in the text. In our case, the larger the word in the graphic, the more frequently it occurs in the Mentimeter text. The word clouds in this document were produced in Python 3.8.0 by adapting the *wordcloud* module<sup>2</sup>, and applying a mask created in Adobe Photoshop that produces the "backdrop" in the shape of a phone. The word cloud in Figure 1 is generated by merging the text data across all workgroups, whereas Figures 2 - 7 are based on discrete text from each of the six workgroups.

---

<sup>1</sup> Transform911 Team. (2022). Public feedback during Transform911's Alternative First Responders workgroup convening session on March 2, 2022. University of Chicago Health Lab.

<sup>2</sup> Mueller, A. (2020). WordCloud for Python documentation—Wordcloud 1.8.1 documentation. [http://amueller.github.io/word\\_cloud/](http://amueller.github.io/word_cloud/)

*Figure 1. All Workgroups*





## Alternative First Responders Workgroup

Recommendations:

- Emphasize trauma-informed, culturally-sensitive, person-centered response
- Collect data to understand needs, iterate on progress, and support accountability
- Build toward sustainable positive outcomes for everyone involved in the system
- Create community-led accountability to support desired impact

Questions:

- What context or information would you want a first responder to know before they come to help with an emergency in your neighborhood?
- How do you think we can ensure that alternative response agencies have the staff, funding, and resources they need?
- What do you think is missing from these recommendations that is really important to consider when it comes to alternative first responders?

Figure 2. Alternative First Responders Workgroup



## Emergency Communications Center Operations Workgroup

### Recommendations:

- Ensure ECCs are independent agencies and not subordinate to peer agencies (fire, police, and EMS)
- Ensure governing authorities and boards that control emergency communications centers are representative of the community they serve
- Require ECCs to offer all advanced services, including text-to-911 and enhanced location data, required by the i3 standards – particularly for people
- with disabilities and people whose first language is not English
- Formally recognize emergency communication professionals as public safety responders at the local, state, and federal levels
- Ensure state statutes require communication interoperability among fire, police, EMS, and alternative responders
- Develop a credentialing process for technology vendors to apply and demonstrate compliance with all American National Standards Institute standards
- Legislate a national minimum training standard for emergency communication professionals

### Questions:

- ECCs should be independent and not subordinate to peer agencies (police, fire, and EMS). What are your reactions to this?
- Ensure state statute requires communication interoperability among fire, police, EMS and alternative responders. What are your reactions to this?
- How might we educate the public on avenues available for support when they do not have a critical law enforcement, fire or medical need?

Figure 3. Emergency Communications Center Operations Workgroup







## Hotline Alternatives Workgroup

### Recommendations:

- Center the voices of those who have experienced unintentional harm or trauma by the emergency response system
- Foster a robust, well-marketed, and transparent ecosystem of alternative hotline options, including those both directly connected or not to
- centralized emergency response centers
- Identify 911 emergency calls-for-service that could be safely transferred to alternative hotlines through community engagement, services gap
- analysis and law enforcement data analysis
- Develop alternative hotlines that can provide immediate access to, and robust knowledge of, available resources that offer personalized supports
- Ensure viable alternative hotlines are cost-free, widely accessible, technology driven, and able to support high call volumes 24/7

### Questions:

- Are alternative hotlines a viable option to transform the existing infrastructure of the 911 emergency response system? Why or why not?
- How can alternative hotlines address and/or resolve key systemic issues with 911 centralized emergency response centers?
- How can alternative hotlines obtain/gain buy-in from other public safety entities?
- How can alternative hotlines secure funds to build capacity and infrastructure to support high call volumes?

Figure 5. Hotline Alternatives Workgroup





- Ensure recognition of 911 professionals as public safety professionals
- Reintroduce 911 and 911 professionals to the American public
- Invest in workforce development and inclusive hiring processes
- Take active measures to foster the career development and workplace retention of fully successful 911 professionals

- The SOC goes back to sample in 2024 – any suggestions to ensure accurate info is submitted?
- What should be done that hasn't been done?
- When you hear "marketing campaign," what comes to mind?
- What elements should be included or considered in a national marketing campaign?
- What are your thoughts on building a community or technical college track?
- Do you have related experience or knowledge of where these might already be in place?
- What practices or elements related to employee wellbeing should be included in our recommendations?

[illegible]



## Topic Modeling

The second analytic strategy we used is topic modeling, which mines a body of text to produce clusters of similar words. We employed a method known as Latent Dirichlet Allocation (LDA)<sup>3</sup>. Given a large amount of text from the Mentimeter feedback data, LDA uses a statistical algorithm to atheoretically reveal words that cluster together.

The number of clusters for the model to discover was set to 6. This number is arbitrary, although it was chosen to potentially correspond to the six workgroups. However, it is important to note that the model has no prior knowledge of the semantic meanings behind the workgroups. Therefore, it is not possible to predict how well or poorly the six clusters will relate to the six workgroups.

The results of the topic modeling analysis are presented in the next section: first, the intertopic distance map, and second, lists of the most frequent words in each cluster.

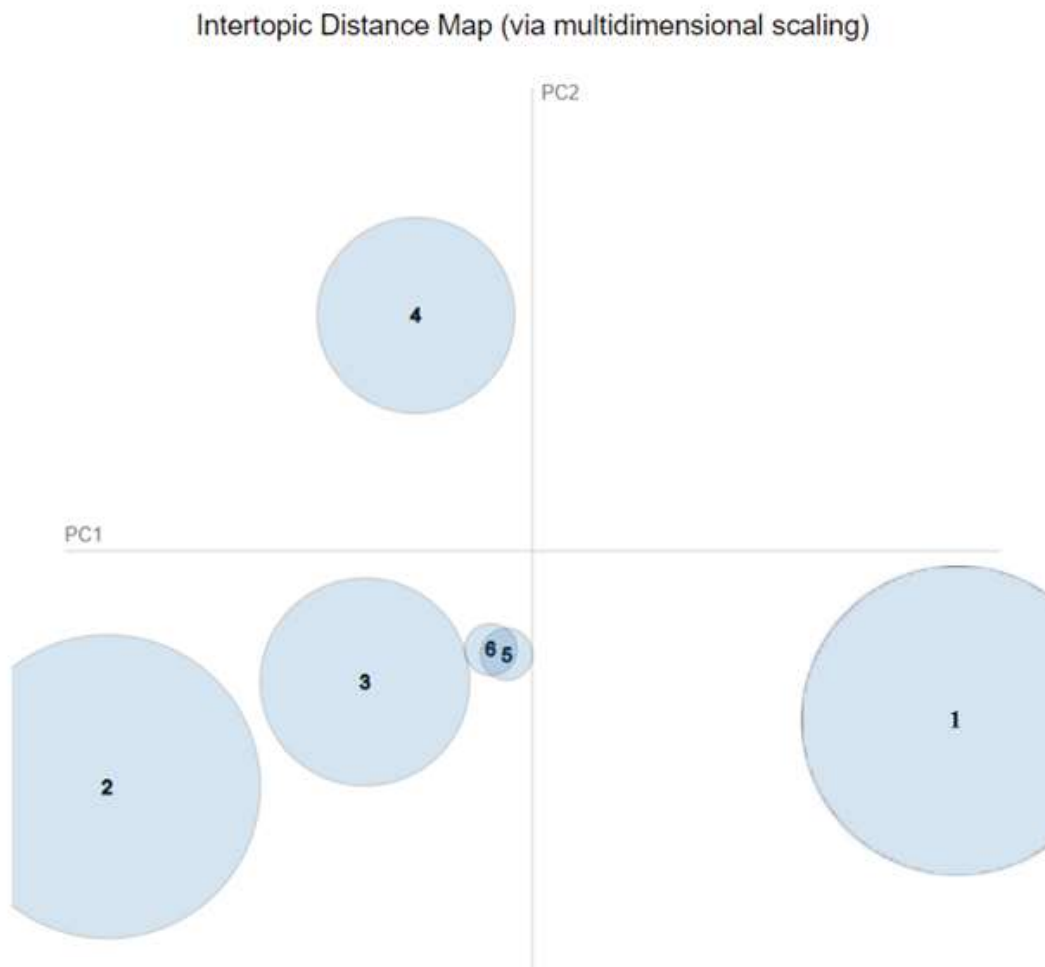
### Intertopic Distance Map

The circles in the intertopic distance map shown in Figure 8 represent the six word clusters that were produced by the topic model analysis. The distance between each of the circles, labeled 1-6, is a spatial approximation of how proximal or distally related each cluster is to the others. For example, two circles that are close to each other suggests that the Mentimeter feedback in these two clusters has a relatively high degree of overlap. The size of each circle represents the proportion of words in that cluster (with respect to the total number of words in the Mentimeter feedback data).

---

<sup>3</sup> Blei, D. M., Ng, A. Y., & Jordan, M. I. (2003). Latent Dirichlet Allocation. *Journal of Machine Learning Research*, 3(Jan), 993–1022. This approach assumes that words within a certain topic occur at defined probabilities.

Figure 8. Intertopic Distance Map



## Most Frequent Words in Each Cluster

Figures 9 – 14 display the top 10 terms within each of the six word clusters. We also present potential overarching themes that may be discerned subjectively from these terms.

### Cluster 1 (34.6% of all words)

Suggested overarching themes: Career, Professional Support, Training

*Figure 9. Top 10 Words in Cluster 1*

Career	Employee
Trauma	Escalation
Weapon	Team
Culture	Historical
College	Peers

### Cluster 2 (33.7% of all words)

Suggested overarching themes: Data, Technology, Governance

*Figure 10. Top 10 Words in Cluster 2*

Vendor	Consolidate
Data	Metric
Gateway	Standard
Feedback	Capacity
Incorporate	Review

### Cluster 3 (15.7% of all terms)

Suggested overarching themes: Media, Public Perception, Outreach, Marketing

*Figure 11. Top 10 Words in Cluster 3*

Agreement	ECC
Believe	Mass
Billboard	School
Independent	Difficult
Media	Booth

### Cluster 4 (14.0% of all words)

Suggested overarching themes: Alternative Hotlines, Alternative First Responders, Governance, Collaboration

*Figure 12. Top 10 Words in Cluster 4*

Hotline	Alongside
Alternative	Hope
Complementary	Resolve
Screen	Policymaking
Complaint	Deploy

## Cluster 5 (1% of all words)

Suggested overarching themes: Public Perception, History of 911, ECC Operations, De-escalation

*Figure 13. Top 10 Words in Cluster 5*

Weapon	Escalate
Cultural	Convict
History	Team
Prove	Salaries
Save	Present

## Cluster 6 (1% of all terms)

Suggested overarching themes: ECC Operations, Governance, Collaboration

*Figure 14. Top 10 Words in Cluster 6*

Hotline	Agree
Vendor	ECC
Consolidate	School
Data	Career
Capacity	Private



**Appendix E3: T911 Recommendations Feedback Synthesis**

**To:** Transform911 Workgroup Co-chairs  
**From:** University of Chicago Health Lab, Transform911  
**Subject:** Summary: Synthesis of feedback on the *Transform911 Recommendations*  
**Date:** May 2, 2022

---

This memo presents a synthesis of the feedback received on the *Transform911* draft recommendations. The draft recommendations were presented publicly for the first time at the Transform911 second convening, held March 2 — 4, 2022. Feedback was gathered from the public via online portal, as well as from reactors identified by the Transform911 team, from March 2 through May 1, 2022. This synthesis consists of feedback from both sources. Where possible, the source of the feedback is identified. Emergent themes for each of the workgroups is included, along with global themes that emerged across the workgroups.

Attached to this memo, we have included summary statistics and visuals presenting public agreement on all recommendations as captured through the online feedback submission forms.

While there is value in considering all the feedback received, not all the feedback included is necessarily an indication of the truth. These are simply people’s thoughts and impressions. Likewise, while all feedback has and will be considered, not all feedback has or should be addressed. In many instances, feedback cut in multiple directions and/or was conflicting.

We are very much looking forward to next steps.

**Overall Feedback/Themes**

Overall, there was lots of appreciation for calling attention to the needs of 911 professionals and the industry as a whole. There were very many instances of comments like, “it’s about time!” or “this is long overdue!” This is indicative of the fact that those working in the industry have long felt overburdened and overlooked. Everyone involved should take pride in the fact that we are shining a light and bringing crucial attention to these issues. Below are the global themes that emerged across all workgroup feedback:

- Funding is critical. Emergency communication centers are already struggling with funding current operations and necessary upgrades. Many of the recommendations will require even further funding, so it’s important that we recognize where additional resources are necessary. This theme emerged most strongly for:
  - Establishing emergency communications centers as lateral, independent organizations
  - Collection of 911-related data
  - Implementing advanced technology and NextGen911
  - Language translation services
- The concept of “accountability” was somewhat concerning for respondents, who largely expressed that they were more comfortable with the establishment of standards than

accountability to outsiders. This feedback took two main forms:

- To whom are we beholden?
  - While respondents felt that the community should have input, they expressed discomfort with the community having decision-making power.
  - Instead, they felt that the industry needs domain experts to make decisions; the community can be uninformed and unrealistic in their assumptions about how 911 does/should function.
- Federal authority and oversight made respondents uncomfortable. They largely did not support federal standards or oversight (or any federal involvement for that matter)
  - Many thought state standards would be more feasible and acceptable.
- Circling of wagons: Overall, some level of defensiveness remains and is suffused throughout the comments. Examples of this type of sentiment include:
  - A lot of “*what does this even mean*”-type comments
  - “We’re already doing this” (e.g., collecting data, promoting sustainable outcomes, and performing gap analysis/CFS analysis)
- Define, define, define: many comments were related to a need to better define concepts or terminology. This came in two separate but related refrains:
  - We (Transform911) need to define \_\_\_\_\_:
    - Who is the community (alternative first responders)
    - Sustainable positive outcomes:
      - Sounds like establishing a pre-defined outcome
      - Is too broad to focus on during emergent responses
    - Community-led
    - Achieving equity
    - Accountability
  - Who gets to define \_\_\_\_\_ (e.g., what is ethical; uniform data standards)?
- Language: some of the chosen language may be inaccessible or triggering for certain audiences. Notable examples were:
  - “Centering on”
  - “Sustainable positive outcomes”
  - “Inclusive hiring practices”
- Scope of 911: there is still very much a disconnect between what 911 professionals do and anything that comes afterward. Some examples of this include:
  - You can’t talk about alternative responses in the same breath as 911 because “we” don’t do that.
  - These recommendations are really about transforming the whole system, not “911” proper.
  - Related theme: 911 is about responding to an event (e.g., in the now), so recommendations pertaining to cultural competence or trauma-informed care are outside of the scope and/or will cause delays.
- Evidence: point to evidence for the recommendations and acknowledge where it doesn’t exist.
- There is some sense that the recommendations focus too much on the community and not enough on 911 professionals. For example:
  - “Positive outcomes” seem to be defined as community-facing and not taking into account 911 professionals (and responders).
- Data privacy/confidentiality concerns

- In particular, some respondents called for more attention to the issues surrounding sharing data (particularly sensitive Protected Health Information (PHI) or criminal justice data) with outside groups (such as civilian responders).
- Phased recommendations: some respondents urged us to consider phasing recommendations, such as by identifying short-term vs. long term strategies.

## **Alternative First Responders**

Overall, many respondents supported the idea of establishing alternative responders. There was support for expanded continuing education and standards, as well as some community involvement, but less so for accountability to the community and/or federal government.

- Defensiveness: "Accountability" is provoking and infers you are looking for something wrong. Watch out that reporting requirements don't create an undue burden.
  - More training, continuing education, and standards for 911 professionals, but not necessarily accountability (esp. to the community)
- Purpose of 911 is to respond to an event in the NOW, not to address things like cultural competence
  - 911 professionals don't have enough time for this/some of these are outside the scope of 911
  - 911 meant to address the call, not treat the caller
- Define, define, define
  - Who is the "community?" Community doesn't have a singular voice; who gets to decide? Who's values win when there is a conflict?
    - Community should have a say within reason. When community voices an opinion that the system thinks won't work, how is the outcome decided?
    - How to manage community's unrealistic expectations of what 911 is/does? How to make sure that they are informed before they bring their unrealistic assumptions to bear
    - You need skilled professionals making decisions, not the community
  - Sustainable positive outcomes
    - Need positive outcomes for responders too
  - Community-led
  - Accountability
- Include focus on second response

## **911 Professional Careers and Supports**

Overall, there was strong support for recognizing 911 professionals as first responders, in recognizing their importance, and in investing in the 911 workforce.

- Strong support was expressed for recognizing 911 professionals as first responders
  - This is one of the few sentiments expressed without caveats
  - We may want to mention/recognize the CARES Act
- Strong support was expressed for increased investments in 911 professionals
  - Recognize that increased staffing overall is critical

- Recognize that career development and continuing education is incommensurate with things like mandatory overtime
- Offer additional recommendations, like trauma peer support and retirement and other benefits that are commensurate with other first responders
- Some respondents were concerned with the concept of “inclusive hiring practices”
  - This seemed to be triggering for some generally
  - Some suggested that we need to specify that 911 is a skills-based profession above all else and that “inclusive” hiring can’t take the place of hiring for skill/hiring the most qualified candidates
- There was mostly strong support for reintroducing 911 professionals to the public
  - Many felt that this would help with recruitment efforts
  - Some expressed that they feel that the public already acknowledges the importance of 911 professionals
- In general, clearly state that many of the issues experienced by 911 professionals stem from chronic understaffing and mandatory overtime.

## **911 Technology and Infrastructure**

Overall, respondents supported the establishment of data ethics statements and uniform data standards, as well as the implementation of more modern tools and technology. Some expressed worry about who would define things like ethical use of data and data standards. Similarly, some worried that blanket requirements of NextGen 911 and i3 are overbroad.

- Technology improvements: overall there was strong support for tech improvements, such as better data, video, text-to-911, and enhanced location, but related concerns about:
  - The need for additional resources.
  - Blanket requirements for NextGen 911 may be unrealistic given the variability in ECCs, urban vs. rural settings.
- Some concerns were expressed over who gets to define (guidelines vs. standards; state vs. localities vs. community) things like:
  - "Ethical" (as in data ethics statements)
  - "Uniform data standards"
- Some concerns were expressed over the sharing/storing of data:
  - Collaborations with outside partners (e.g., social workers) creates some data sharing challenges, especially with protected health information (PHI)
  - Safe and secure storage of personal information should be considered fir recommendation
- Interoperability and procurement: IJIS and APCO have already done extensive analysis and have recommendations
  - Procurement is a very localized/state-driven thing. Hard to imagine a playbook could be applied
- Cite evidence:
  - Define what you mean by “grounded in evidence”
  - Cite available evidence for your recommendations
- It may be helpful to identify short-term vs. longer term strategies

### ECC Operations

Overall, there was strong support for establishing emergency communications centers as independent, lateral organizations, even as there was doubt that current local stakeholders (e.g., police chiefs) would support it. There is also strong support for increased funding and resources.

- ECCs as independent, lateral organizations:
  - It will be hard to convince local jurisdictions and police chiefs, who currently have control, to support this. And expensive to do.
  - Even independent ECCs have boards that are mostly police and fire (some states require representation).
  - May need to distinguish between call taking and dispatching: some locations require dispatch from within department (e.g., police dispatch police).
- Governing authorities: composition of these bodies is important. They are likely to be filled with local elites, installed by local politicians and thus may not actually be representative.
- State level vs. federal level standards: most respondents suggested that state standards would be preferable to federal ones.
  - Many suggested that establishing federal standards goes against the local nature of 911 services.
- Technology:
  - i3 is not the same as text-to-911 and enhanced location. i3 requires lots of new and untested technology, so blanket requirement to comply with i3 isn't realistic.
    - Consider that this may be cost-prohibitive for smaller ECCs
  - Be careful about the broadness of alternative responder interoperability.
    - Do we mean to require that alternative responders have access to PHI and privileged legal records? If so, recognize that these may be protected at a level that will not permit sharing with those outside the organization/civilians.
- More funding is needed for many of the recommendations, including ECC independence, enhanced technology, and language translation services.

### 911 Governance

Overall, respondents supported coordination among emergency communications centers, but this largely did not include consolidation. Similarly, respondents supported some community involvement, but not decision-making power (which many felt should remain with those having domain knowledge). Many supported standards, preferably at the state level; and some pointed to existing standards set by the Federal Communications Commission (FCC) and NENA/APCO.

- Consolidation is a complex topic.
  - It will be difficult to implement in states with home rule
  - Consolidation can dampen local voices; homogenize in unhelpful ways
    - Diversity among ECCs may exist for a local reason
    - Can lead to large conglomerates making the decisions instead of locals; reduction of local experience and knowledge

- It may lead to lost jobs for 911 professionals
  - Recommendation comes across as out of touch with the preferences of the 911 community
  - Consider “coordination” instead of consolidation
- Community voices as "input," not power over (lots of uninformed voices in the community)
- Lack of support for federal standards/cabinet-level position
  - There is already too much red tape involved in the 911 system
  - Folks at federal level know nothing about 911/FCC already does this
  - 911 operations have always been set locally because there are so many local factors involved.

## **911 Hotline Alternatives**

Overall, most respondents supported the establishment of alternative hotlines, though support was not universal. Some worried about requiring the public to remember/distinguish between additional numbers; others felt that these alternatives should be operated by the 911 system because it already has the logistical know-how. Many brought up the need for funding—for both existing systems and new hotlines.

- Most respondents supported the establishment of alternative hotlines. Some caveats were also expressed:
  - Worry that people will be required to remember yet another number (and may simply call 911 as a result)
    - Expressed support for public education/marketing these alternatives
  - There is a need for transparency about things like whether police will be sent (e.g., requirements for certain call codes where involving police may be mandated)
  - “Free” hotlines require funding support
  - Some support for these being operated within existing 911 infrastructure (though some felt the opposite way: that ECCs are already overburdened and so could not be responsible for operating these additional hotlines)
- People took issue with the word "center" as in center on the community...
  - Assumed that those that are harmed are "outliers?" [even if they are, shouldn't the failures – even when limited in number – inform us?]
- Funding: Don't divert funding from the 911 system!
  - Many comments in this section were about funding. These took two major forms:
    - 911 is already in place; hotlines unnecessarily divert resources
    - Hotlines should be run through ECCs



# TRANSFORM 911

## Public Feedback on Draft Recommendations

Total feedback form submissions on [Transform911.org](https://transform911.org), 3/2/22 – 5/1/22

Day 1 (Alternative First Responders and 911 Pro): **77**

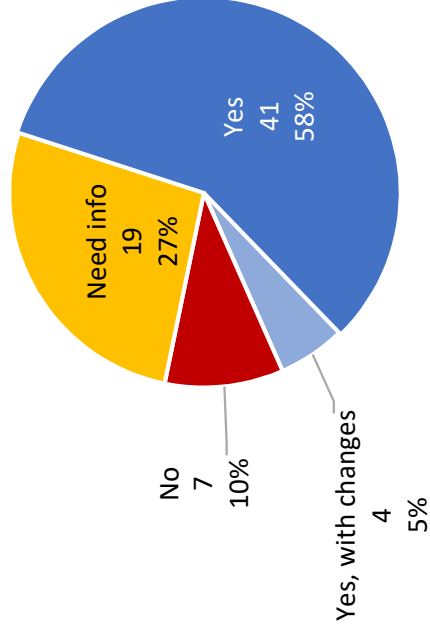
Day 2 (Technology and ECC Operations): **58**

Day 3 (Governance and Hotline Alternatives): **70**

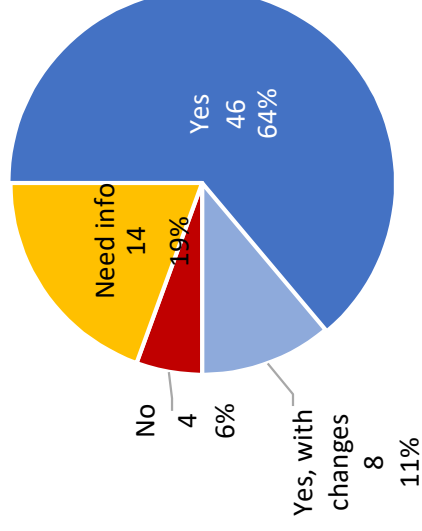
Total: **205**

## Alternative First Responders

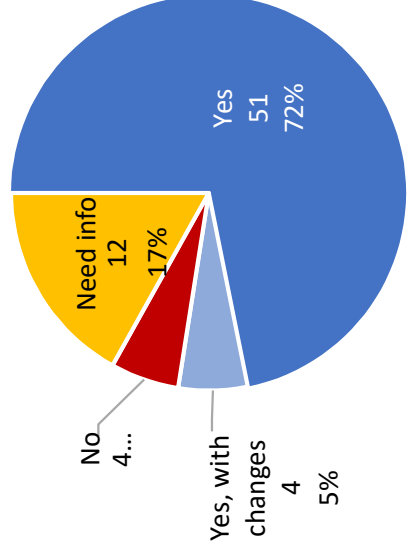
1. Emphasize trauma-informed, culturally-sensitive, person-centered response.



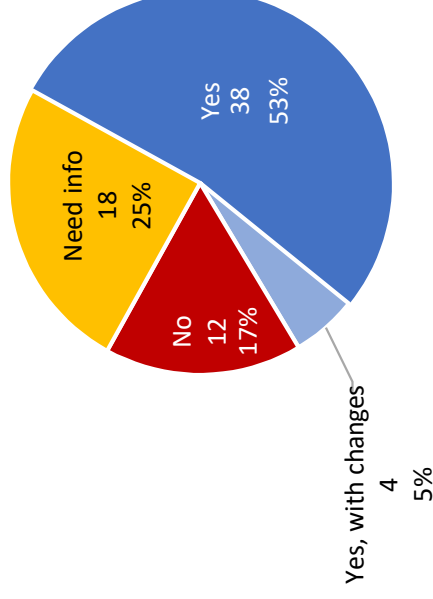
2. Collect data to understand needs, iterate on progress, and support accountability.



3. Build toward sustainable positive outcomes for everyone involved in the system.

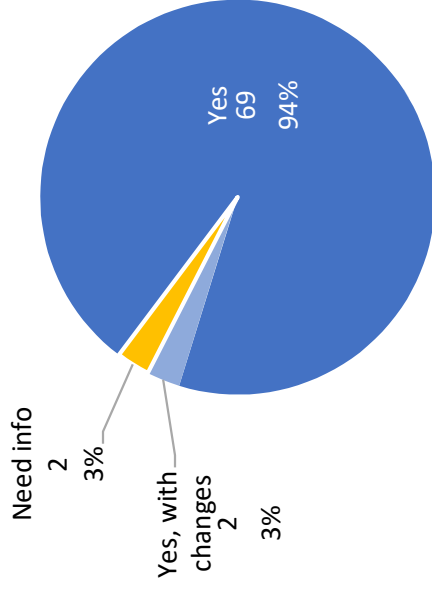


4. Create community-led accountability to support desired impact.

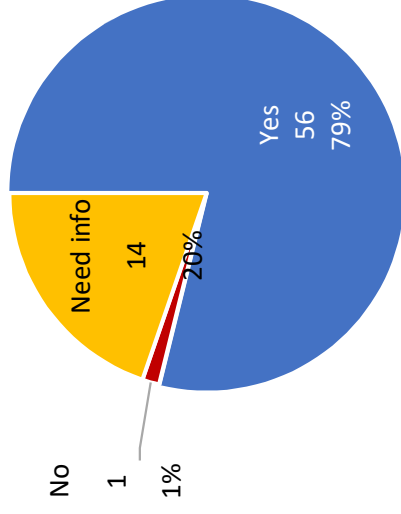


## 911 Professional Career and Supports

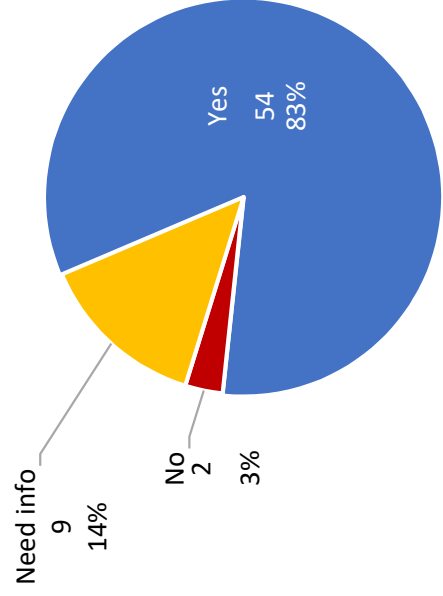
1. Ensure recognition of 911 professionals as public safety professionals.



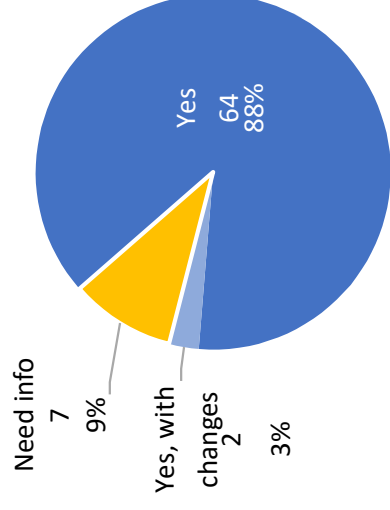
2. Reintroduce 911 and 911 professionals to the American public.



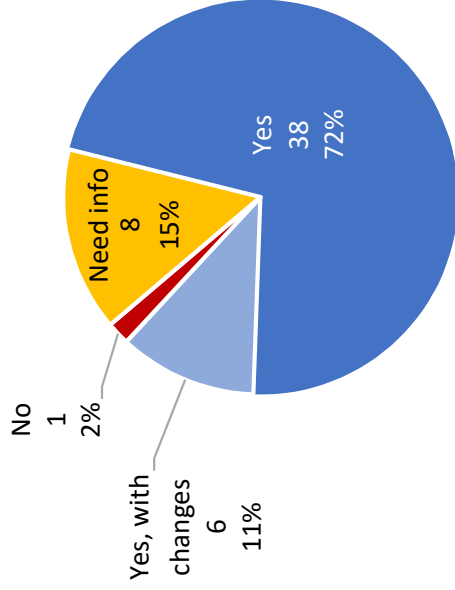
3. Invest in workforce development and inclusive hiring processes.



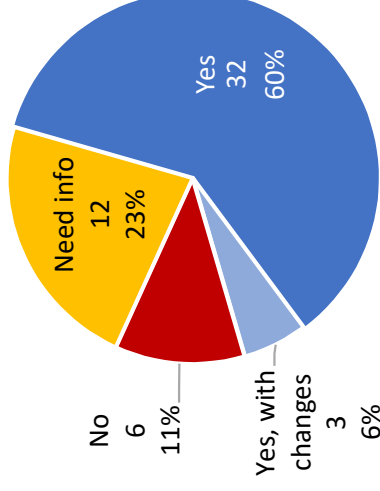
4. Take active measures to foster the career development and workplace retention of fully successful 911 professionals.



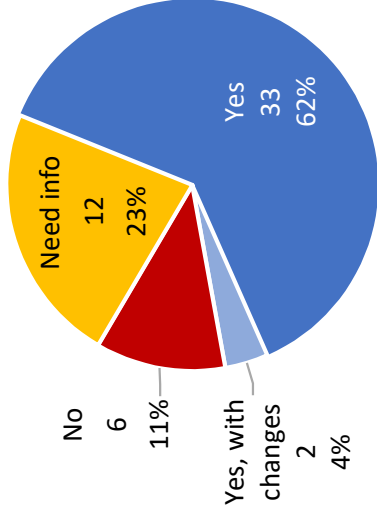
1. Adopt NextGen911 to create more equitable and effective emergency response outcomes.



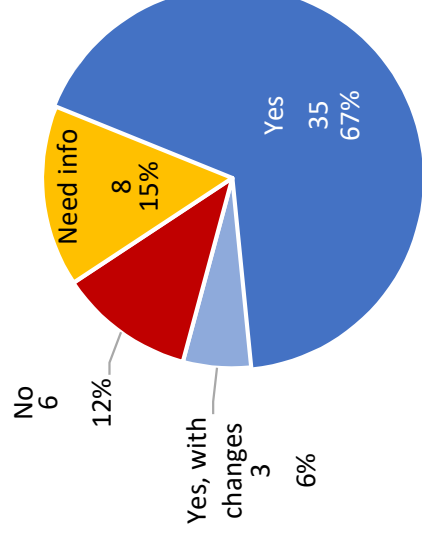
2. Develop a data ethics statement to ensure appropriate and ethical use of personal information in emergency service decision-making.



3. Define and implement uniform data standards for call data to enable government transparency, achieve equity, and improve emergency response outcomes.

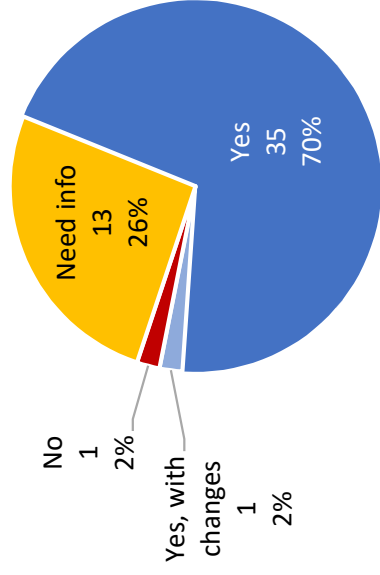


4. Empower and incentivize ECCs with modern tools by using dedicated shared services models and cloud-based services to improve consistency and quality of service.

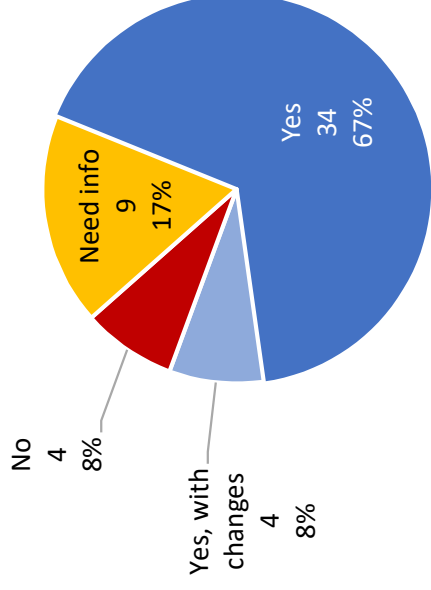


## 911 Technology and Infrastructure (2 of 2)

5. Develop an emergency procurement playbook: a living document that helps emergency services professionals navigate the complexities of funding, technology, and operations.

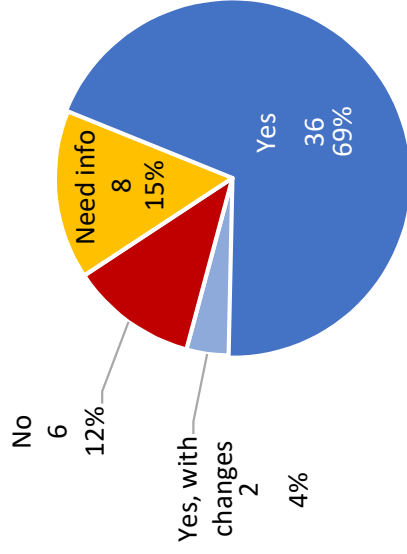


6. Require vendors to provide real-time access to call data for reporting and analytics to support continuous improvement.

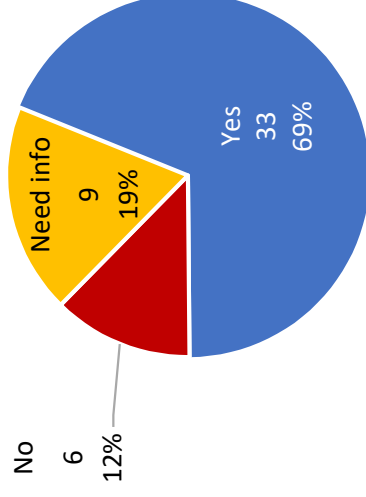


## ECC Operations (1 of 2)

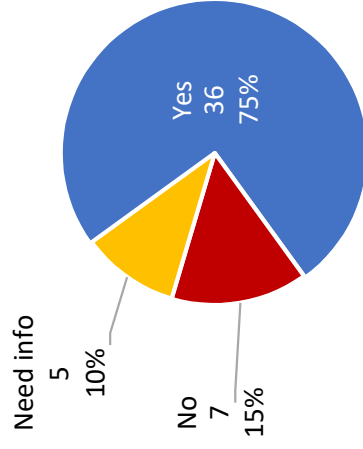
1. Ensure ECCs are independent agencies and not subordinate to peer agencies (fire, police, and EMS).



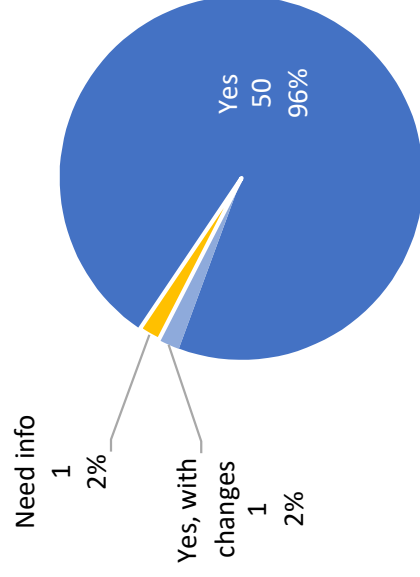
2. Ensure governing authorities and boards that control emergency communications centers are representative of the community they serve.



3. Require ECCs to offer all advanced services, including text-to-911 and enhanced location data, required by the i3 standards – particularly for people with disabilities and people whose first language is not English.



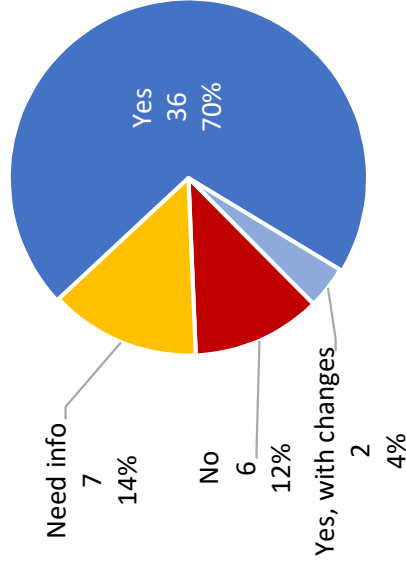
4. Formally recognize emergency communication professionals as public safety responders at the local, state, and federal levels.



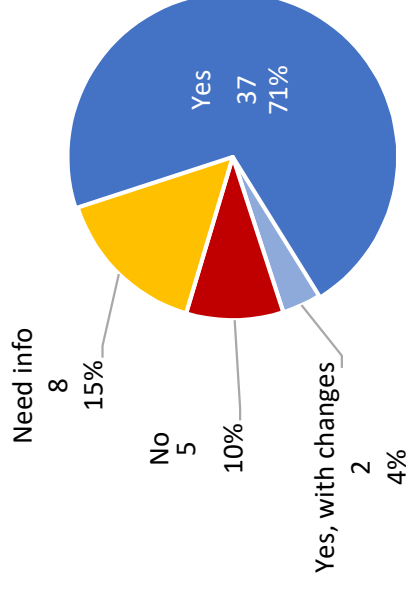


## ECC Operations (2 of 2)

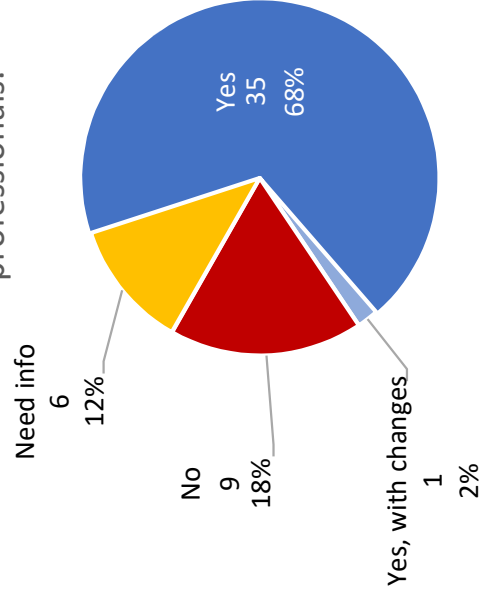
5. Ensure state statutes require communication interoperability among fire, police, EMS, and alternative responders.



6. Develop a credentialing process for technology vendors to apply and demonstrate compliance with all American National Standards Institute standards.

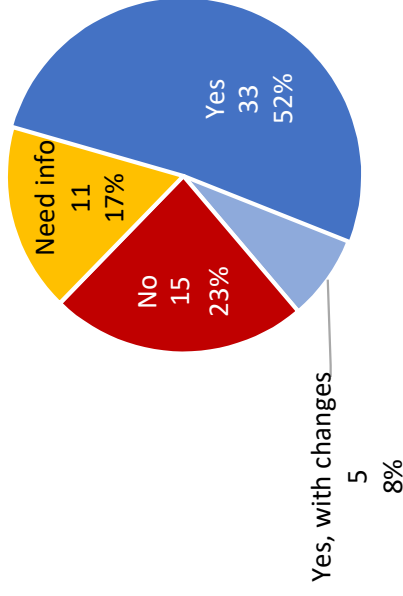


7. Legislate a national minimum training standard for emergency communication professionals.

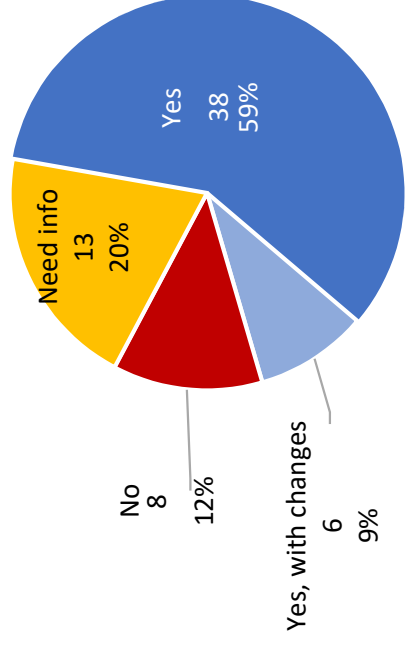


## 911 Governance

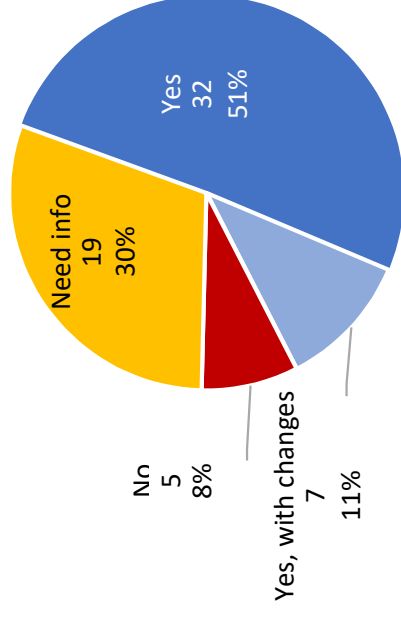
1. Establish a high-level federal position and cabinet-level working group to create and implement national standards for 911.



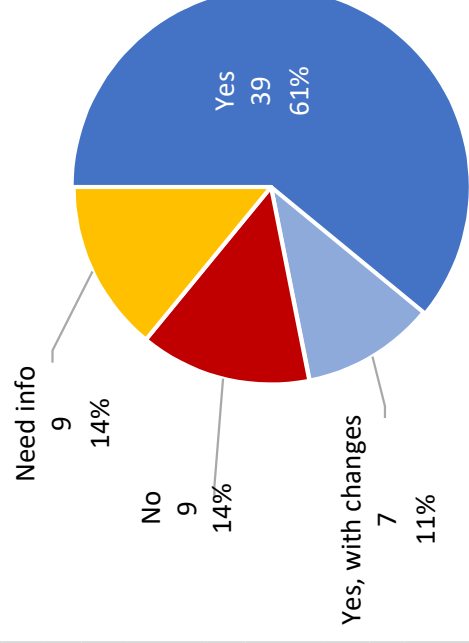
3. Establish national and state level standards for how ECCs operate.



2. Invest 911 professionals and community members with power in governance decisions.

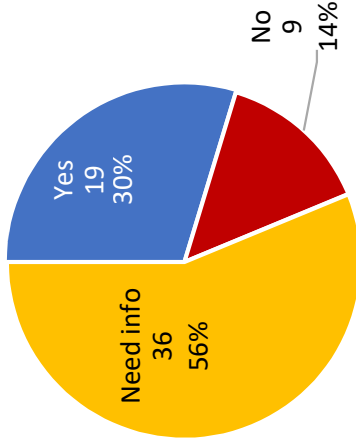


4. Increase coordination among ECCs and consolidate where possible.

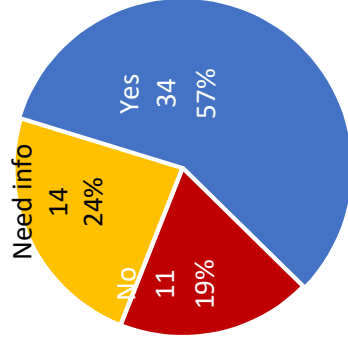


## 911 Hotline Alternatives (1 of 2)

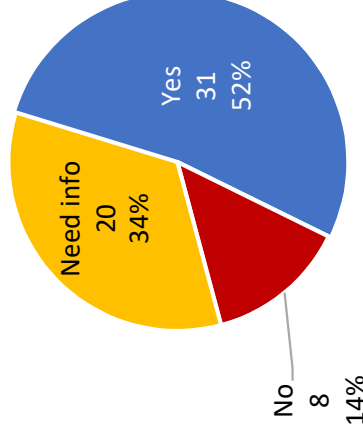
1. Center the voices of those who have experienced unintentional harm or trauma by the emergency response system.



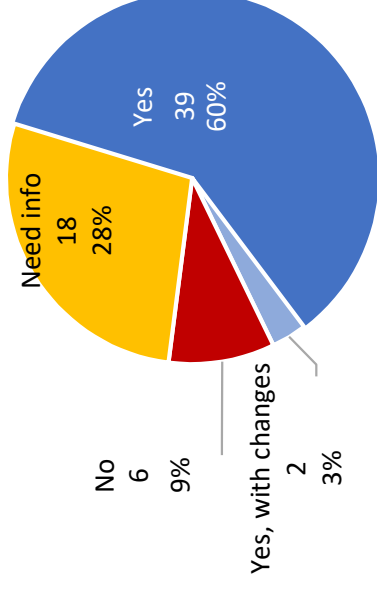
3. Identify 911 emergency calls-for-service that could be safely transferred to alternative hotlines through community engagement, services gap analysis and law enforcement data analysis.



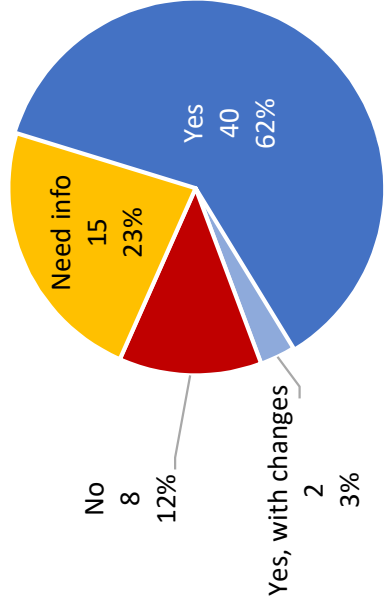
2. Foster a robust, well-marketed, and transparent ecosystem of alternative hotline options, including those both directly connected or not to centralized emergency response centers.



4. Develop alternative hotlines that can provide immediate access to, and robust knowledge of, available resources that offer personalized supports.



5. Ensure viable alternative hotlines are cost-free, widely accessible, technology driven, and able to support high call volumes 24/7.



## Appendix F: Workgroup Recommendation Crosswalk

The crosswalk below shows how each workgroup's recommendations were woven into the blueprint. The workgroup recommendations, as updated after receiving the feedback outlined in Appendix E3, are mapped onto one of the six blueprint recommendations as indicated with an X below.

The workgroups are coded as follows:

Pro = 911 Professional Career and Supports

AFR = Alternative First Responders

ALTS = 911 Hotline Alternatives

ECC = Emergency Communications Center Operations

GOV = 911 Governance

TECH = 911 Technology and Infrastructure

Workgroup Recommendation	Reintroduce 911	Of, by, and for the people	Workforce	Equal and independent local agencies	Diverse and appropriate response	Ethical and transparent tech and data collection	Federal money for federal standards
<b>Pro1:</b> Ensure recognition of 911 professionals as public safety professionals			X				
<b>Pro2:</b> Reintroduce 911 and 911 professionals to the American public	X						
<b>Pro3:</b> Invest in the talent pipeline to reflect the demographic composition of the communities served.			X				
<b>Pro4:</b> Take active measures to foster the career development and			X				

## TRANSFORM 911

[illegible]



**TRANSFORM** 911

[illegible]

[illegible]

<b>ECC8:</b> Collect feedback from dispatchers and responders about the options available to them, the nature of information provided from the call, and the outcome of the response. Use this to inform call-taking protocols and procedures for medical, police, fire, behavioral health, and other public safety incident calls.				X				
<b>GOV1:</b> Establish a high-level federal position and cabinet-level working group to create and implement national standards for 911.								X
<b>GOV2:</b> Invest 911 professionals and community members with power [2] in governance decisions.				X				
<b>GOV3:</b> Establish national and state-level standards for how ECCs operate to ensure consistent, equitable delivery of service regardless of location in the country.								X
<b>GOV4:</b> Increase coordination among ECCs and consolidate where possible								X
<b>TECH1:</b> Adopt end-to-end NG911 to create equitable and effective emergency response outcomes.							X	
<b>TECH2:</b> Develop and maintain a policy on the ethical use of technology and data in emergency response, which covers data							X	

[illegible]

## Appendix G: Operationalizing and Evaluating the Recommendations

The workgroup recommendations that had a research component are included below, along with the proposed research method to be used to examine them.

Workgroup Recommendation	Research Questions	Research Strategy/Methodology
Ensure Recognition of 911 Professionals as Public Safety Professionals	How are 911 professionals viewed by public officials and the general public? Is the public's understanding of the various 911 pro roles accurate? Does the public distinguish between 911 pros and other first responders? To what degree does the public appreciate the work of 911 professionals? Does the degree of appreciation of 911 differ from that of other first responders?	Survey of public officials - public safety directors, mayors, county executives, etc. (partner with ICMA, NaCO and/or US Conf of Mayors?). Public survey could also be done (partner with NORC or Gallup)? Surveys could be used for baseline purposes (conduct new survey after public awareness campaign to assess impact) as well as the survey itself being a means of generating more awareness of the important role of 911 pros.
Re-introduce 911 and 911 Professionals to the American public	What are the most effective messages on who 911 pros are and what they do? How are they best communicated?	Surveys described above could help refine messaging, as could focus groups. Research on communications strategies could also be done - for example randomizing two types of messages or communications to discern impact through post-communication surveys of recipients (see above item, which is complementary)
Invest in workforce development and inclusive hiring processes	What are the best strategies to attract people to the 911 profession? What types of recruitment measures work best? What methods are effective in encouraging people from communities with high 911 call volumes to apply?	Conduct research on effective recruitment strategies in other/adjacent professions. Implement and evaluate new 911 pro recruitment strategies.
Take active measures to foster the career development and workplace retention of fully successful 911 professionals	What measures work best to support and retain 911 professionals?	Conduct surveys of 911 pros, including those who have chosen to leave the profession. Use information to implement and evaluate new career development and retention strategies.

Emphasize trauma-informed, culturally sensitive, person-centered response	Does adopting a trauma-informed approach improve service delivery while reducing harm? Does it reduce stress and increase retention among 911 pros?	Introduce trauma-informed trainings to 911 pros and their first responder partners; measure impacts via surveys and analysis of administrative data.
Build toward sustainable positive outcomes for everyone involved in the systems.	What AFR models work best for effective service delivery and reduced harm? What are the differential experiences of people receiving services through AFRs versus FRs? Do these vary by program model? How do AFR models affect 911 pros and first responders? What impact do they have on budgets?	Most of these questions are answered through evaluations that include surveys of the people involved. Could also do a cost-benefit analysis of AFR models. Although some of the benefits are difficult to monetize (e.g., more trust in government).
Create community-led accountability to support desired impact.	How can communities hold AFR programs accountable? How can they inform AFR approaches to ensure they are effective and minimize undesired outcomes?	Surveys and/or focus groups with members of communities experiencing high and low 911 call volume. Evaluations that compare AFR programs that had robust community engagement processes (including participatory research) as part of their development versus those that did not.
Center the voices of those who have experienced unintentional harm or trauma by the emergency response system.	Who has been harmed by the traditional emergency response system? In what ways have they been harmed - physically, psychologically, "benign" neglect? How have these experiences affected their views of and trust in EMS, first responders, and government writ large? How have these experiences influenced their inclination to seek EMS services in the future? What types of emergency services response would they like to see?	Surveys and/or focus groups with members of communities with high 911 call volume. Participatory research to develop and assess new/alternative approaches. Evaluations that compare AFR programs that had robust community engagement processes as part of their development versus those that did not.
Foster a robust, well-marketed, and transparent ecosystem of alternative hotline options, including those both directly connected or not to centralized	What alternative hotlines are needed? Do the needs vary by community? To what degree do centralized emergency response centers facilitate or inhibit the use of alternative hotlines? What are the best communications strategies	Conduct data analysis to identify type of calls that could be diverted to alternative hotlines; ensure robust quality assurance process to discern degree to which calls are classified accurately. Evaluate differential impact of alt hotline role-out in centralized versus decentralized centers. Conduct



emergency response centers.	to increase awareness and use of alternative hotlines?	research on best communications strategies and their impact.
Ensure viable alternative hotlines are cost-free, widely accessible, technology driven, and able to support high call volumes 24/7.	What methods work best to ensure that alternative hotlines are accessible and can meet the demands of the community?	Evaluations of introduction of alt hotlines re: degree to which the public is aware and uses them, their satisfaction with service delivery, and the degree to which they are sufficiently staffed/funded.
Implement and assess the effectiveness of ECC structures that are independent of fire, police, and EMS.	What are the pros and cons of various ECC governance models? To what degree do ECCs that are independent of fire, police, and EMS have greater efficiencies and fewer undesired/harmful impacts?	Identify natural experiments - are there ECCs that used to be under fire/police and are now independent? And vice versa? Analyze changes in outcomes of interest - increase/decrease in calls by type, location, etc.; safe resolution of calls; reduced need for first responder; etc.
Ensure governing authorities and boards that control emergency communications centers are representative of the community they serve.	To what degree are ECC governance boards representative of the communities they serve? To what degree are ECC governance boards representative of the people and perspectives of communities with 911 call and response volumes?	Survey of ECC governance boards to learn what shares have community member representatives, how those representatives are identified, what their demographics are, and whether they reside in communities with high 911 call and response volumes.
Require ECCs to offer all advanced services, including text-to-911 and enhanced location data, required by the i3 standards – particularly for people with disabilities and people whose first language is not English.	Are 911 systems and alt hotlines accessible to people with disabilities and whose first language is not English? What are the experiences of these populations in accessing 911? What share of ECCs offer text-to-911 and have enhanced location data? What share use video conferencing (e.g. FaceTime) as a means of communicating with them? What share offer translation services?	Surveys of people with disabilities and language barriers. Surveys of ECCs on their current practices. Evaluations of impact of ECC efforts to expand access - to what degree are they successful?
Ensure state statute requires communication interoperability among fire, police, EMS and alternative responders	What states have statutes requiring communication interoperability? How do those statutes vary by content and accountability mechanisms?	Review and summary of state statutes and introduced/pending legislation (partner with NCSL?)
Develop a credentialing process for technology vendors to apply and demonstrate compliance	What credentialing processes exist for technology vendors in other sectors that could be adapted or replicated for 911? How successful	Review of existing technology credentialing processes. Implement a new process in one or more jurisdictions and assess impact.

with all industry American National Standards Institute (ANSI) standards	are they in ensuring vendor compliance with ANSI standards?	
Legislate a national minimum training standard for emergency communication professionals	What is best practice re: training standards for emergency communication professionals? What number of hours (both classroom and field) is sufficient? What is the impact of implementing training standards on 911 performance, efficiency, and safe and equitable resolution of 911 calls?	Evaluate the impact of increased training standards at the state or jurisdictional level. For example if a large state implements minimum standards there could be evaluation re: share of ECCs that adhere to the standards, degree of adherence, implementation quality/fidelity of training, degree to which training delivered desired content, and changes in ECC performance and outcomes.
Invest 911 professionals and community members with power in governance decisions.	What methods are most effective in giving community members and 911 professionals voice in governance decisions? What mechanisms are sufficient to ensure that they are sufficiently engaged and can influence decisions?	Implement new governance models that include 911 professionals and community members and evaluate their effectiveness through focus groups and/or semi-structured interviews and tangible outcomes re: decisionmaking.
Establish national and state level standards for how ECCs operate.	What are the differential outcomes/impacts of ECCs that adhere to all or most of the standards versus few or none? What are the implementation challenges of complying with standards and how can they be overcome?	Surveys or other data collection method to rate ECCs on degree to which they meet standards that the profession has identified; analyses of outcomes of interest comparing high-versus low-adherence ECCs. Process/impact evaluation of efforts to comply with standards. Case studies of agencies that have been successful or unsuccessful and why.
Increase coordination among ECCs and consolidate where possible	What are the best methods to enhance coordination and cooperation among ECCs? What are the pros and cons of various consolidation strategies? To what degree is consolidation cost-beneficial?	Surveys and data collection/analyses of 911 and alt hotline call resolution data based on degree and type of consolidation/coordination. Cost-benefit analyses of various consolidation approaches.
Adopt NextGen911 to create equitable and effective emergency response outcomes	What is the impact of NextGen911 adoption? To what degree do states/jurisdictions/ECCs that have migrated to NG911 achieved greater efficiencies, more effective service delivery?	Evaluate pre/post adoption of NG911, including degree of implementation/fidelity to assess changes in outcomes of interest (service delivery efficiency/effectiveness, safe and

		equitable response resolution, reduced harm).
Develop and publish a Data Ethics Statement to ensure the appropriate and ethical use of personal information in emergency service decision-making	What does the research say about developing and promulgating ethics statements in various sectors/professions? What statements work best and how are they effectively communicated? To what degree does adherence to a code of ethics improve with the dissemination of an ethics statement? To what degree do ethics statements improve behaviors of those they are designed for and other outcomes of interest?	Evaluate the impact of developing, communicating, and implementing a code of ethics on 911 professional staff knowledge, attitudes, and behaviors (through surveys) and outcomes of interest (data breaches) via pre/post data analyses.
Define and implement uniform data standards for call data to enable government transparency, achieve equity, and improve emergency response outcomes.	What is the impact of adoption of uniform standards on cross-agency interoperability and coordination, equitable delivery of services, and improved emergency response?	Identify states that have adopted (or will adopt) uniform standards across all ECCs and evaluate for degree to which ECCs adhered to standards and ways in which the standards improved or created barriers to coordination, transparency, and service delivery (surveys, semi-structured interviews, focus groups, administrative data).
Require vendors to provide real-time access to call data for reporting and analytics to support continuous improvement.	To what degree does requiring vendors to provide real-time access to data reduce the vendor pool (e.g., will fewer vendors respond to RFPs?) To what degree do selected vendors comply with data sharing requirements? What are the barriers (e.g., data storage?) to data sharing and how can they be overcome?	Evaluations/assessments from other sectors; evaluation (mostly qualitative) of experiences in a specific state or jurisdiction .

**Appendix H: Questions for Inquiry and Action**

*These questions from the Transforming 911 report identify areas that require additional research.*

Wave One: These questions were ranked highest by the Transform911 research delegates and are recommended for the first wave of 911 research.

- 1.1 What share and types of calls to 911 and 311 are appropriate for diversion to alternative responders or co-response units? To what degree do existing alternative responder resources and co-response units meet the needs of various communities, call types, and populations? What gaps exist and by what type of calls/needs and areas of alternative responder expertise?
- 1.2 Are community members more or less satisfied with services they receive via alternative responders versus police officers? To what degree do services received through alternative responders affect community members' perceptions of trust in municipal services, public safety services, and the government overall? To what degree do they affect community members' future willingness to call 911 for police services? To what degree do they affect community members' future willingness to call alternative hotlines? Do these outcomes vary by type of alternative responder and/or type of problem or issue to which they respond?
- 1.3 How effective are alternative first responder programs at resolving problems and reducing police dispatch, use of force and disparate outcomes, especially for those who reside in marginalized communities, communities of color, and areas with historically high 911 call volume? What are the advantages and disadvantages of giving 911 professionals more agency to divert calls from police dispatch? What is the impact on public safety outcomes, use of excessive force, racial disparate policing, and community trust in the police?
- 1.4 How and to what extent would increased community availability and awareness of behavioral health resources and supports allow 911 professionals to divert more calls from police response?
- 1.5 How could 911 technology infrastructure better support standardized data collection around volume and type of 911 calls, responses, and associated outcomes?
- 1.6 To what degree does the introduction or expansion of alternative hotlines divert calls away from 911, reduce the dispatch of police officers, or increase the dispatch of non-sworn social workers or mental health clinicians?
- 1.7 To what degree does co-location of nurses, mental health clinicians, or social workers at ECCs facilitate safer and more effective safety and health outcomes for people in need?
- 1.8 What share and types of calls to 911 and 311 result in police dispatch? What share and types of those calls result in a co-response, and what types of co-responses (paramedics and police, mental health specialists and police etc.) are those calls receiving? To what degree does that vary by ECC, region, or state? How accurate is the coding and classification of data on call type and priority level? What methods can improve the accurate classification of calls and thus the quality of data needed to improve the quality and efficiency of ECC service delivery?

- 1.9 What are the relative benefits of various call-taking and triaging protocols and standards? To what degree do they improve accurate classification and coding? To what degree do they result in over- or under-triaging?
- 1.10 What policies and calltaking protocols work best in identifying which calls to divert to alternative resolution or responder? To what degree do calltakers comply with those guidelines? What are the differential outcomes in call resolution based on variation in calltaker compliance? What strategies work best in ensuring calltaker compliance? To what degree does calltaker engagement or training influence the accuracy of alternative responder protocols and degree of implementation fidelity?
- 1.11 To what degree does the introduction of various forms of alternative hotlines reduce or increase racially disparate outcomes?
- 1.12 What are the intersections among 911, 311, and 988 governance models and how can they inform efforts at streamlining coordination, cost-containment, and efficiency of service delivery?
- 1.13 What is the difference in the quality of response to calls made to alternative hotlines versus those made through 911?
- 1.14 How is CAD best structured to support optimal outcomes for call-taking, triaging, assessment, dispatch, response, and follow-up? How might different CAD user interfaces or dashboards influence triaging decisions?
- 1.15 How can technology needs be assessed objectively in a manner that informs the actual needs of the 911 profession and community rather than guided by the introduction of new applications promoted vendors?
- 1.16 What is the impact of training 911 professionals in implicit bias and procedurally-just interactions with members of the public as measured by rate of 911 professional call resolution, share of calls resulting in police dispatch, nature of police response, and public safety and wellness outcomes?
- 1.17 What framework would support the national collection of 911 data to understand the volume, type, resolution, and costs of calls and their associated responses? How might such a data collection inform 911 governance models in the context of increasing equitable access to emergency services and reducing harms and disparate outcomes?
- 1.18 What are the most effective recruitment and retention strategies for 911 professionals? How does the effectiveness of these strategies vary by age, sex, geography, and other factors?
- 1.19 What share of alternative hotline calls are resolved without having to dispatch someone? What share result in the dispatch of an officer versus a social worker, mental health clinician, or other non sworn responder?

Wave Two: These questions are recommended for the second wave of 911 research.

- 2.1 Do alternative hotlines lead to reductions in police dispatches by race and community demographics?

- 2.2 To what degree does the underlying 911 technological infrastructure reduce or exacerbate the under- or over-triaging of calls to 911? Can changes to 911 technology reduce the over-triaging of calls pertaining to people of color?
- 2.3 To what degree does reclassification of 911 professionals from administrative to first responder facilitate better outcomes for field responders and for people who are the subject of calls?
- 2.4 Recognizing that the measurement of bias in service delivery of any type is vital to an equitable and well-functioning government, to what degree do alternative first responses mitigate or exacerbate biased outcomes? How might these outcomes vary by the degree to which they are connected to or involve the police?
- 2.5 What impact do alternative response models have on measures of police and community safety? Do these impacts differ by type of community (urban, rural, affluent, marginalized) and demographic of caller and subject(s) of call?
- 2.6 What are the relative costs (including time spent on scene) and potential savings of alternative hotlines, and where are any savings reinvested (e.g., to support the operation of the hotline or back into the community)? Do they reduce disparate outcomes associated with those calls that still result in police dispatch?
- 2.7 Do variations in behavioral health resources by community demographics lead to disparate outcomes for community members? To what degree does increasing access to behavioral health resources in communities of color reduce police dispatch, arrests, and use of force in response to such calls?
- 2.8 How can technology provide better 911 and alternative hotline access for users who are nonverbal, hearing impaired, or who do not speak English fluently? How well does text-to-911 serve their needs?
- 2.9 How do different communication types (call, text, multimedia) affect performance indicators like call outcome and response time? Do they have any impact in promoting more or less equitable and less harmful responses to request for emergency services?
- 2.10 What share of non-police alternative responses ultimately result in police dispatch? Does this proportion vary by call type or characteristics of the community, caller, or call subject(s)? What factors are associated with calls for police dispatch that occur before arrival of the alternative response versus during or after alternative responses are attempted?
- 2.11 What data are needed to support triage and dispatch protocols for communities with alternative response options?
- 2.12 What types of governance structures work best in the interest of promoting interoperability and coordination between public safety and nonprofit or other governmental crisis hotlines and responders? What are the impacts of improvements to 911 professionals' supervision, wellness supports and resources, and compensation levels on their job satisfaction, job performance, and tenure?



- 2.13 What impact will the introduction on 988 have on the share of people who seek helpline versus 911 services? What are the issues and challenges associated with rerouting calls to 911 to 988 and vice versa? Are people who seek suicide and mental health services through 988 less likely to experience a police response or hospitalization compared with those who call 911 for the same services? To what degree does the inability of 988 to geolocate the call source compromise the ability to provide life-saving services?
- 2.14 What changes to the structure of ECCs would promote more accessible, equitable, and effective delivery of emergency services (e.g., increase access to people with disabilities, reduce over- and under-triaging, support the offloading of appropriate calls to alternative resources/responders)?
- 2.15 To what degree do efforts to create more behavioral health resources (e.g., the inclusion of mental health professionals in ECCs, the increase in availability of behavior health services in the community) improve service delivery and reduce the use of police responders?
- 2.16 How can governance support communications strategies to encourage the public to use alternative hotlines, such as 988, and what is required to enable 911 professionals to reroute callers to 988?
- 2.17 Is it possible to isolate whether some types of governance structures lead to more efficient, cost-effective, and equitable outcomes in public safety and crisis intervention service delivery compared with others?
- 2.18 To what degree do more inclusive governance models lead to more equitable delivery of public safety and crisis intervention services?
- 2.19 To what extent do existing training opportunities meet the needs of 911 professionals and the demands of the job? Why do some 911 professionals pursue in-service training opportunities while others do not? What is the impact of certification and training requirements on 911 professionals' capabilities and job performance, particularly with regard to resolving calls on their own and adherence to triage and dispatching policies and protocols?
- 2.20 How can 988 be governed to ensure that emergency services are delivered quickly in life-threatening circumstances while protecting the privacy and anonymity of callers?
- 2.21 How can existing and NG911 technologies be improved to promote more seamless and efficient rerouting from 911 to alternative hotlines and helplines?
- 2.22 How can machine learning assist 911 professionals to provide appropriate responses to medical and other emergencies?
- 2.23 What internal (e.g., personality, coping) and external (e.g., work conditions, shift) factors increase the likelihood of resilience among 911 professionals?
- 2.24 Are alternative hotline responses faster or slower (including call hold time)?

2.25 What is the nature of existing demand for and current responses to calls for emergency and crisis services and how does that inform various governance structures and consolidation measures?

2.26 What are the advantages and disadvantages of different 911 funding models, and which ones best support efforts to divert calls for emergency services to alternative responders?

2.27 To what degree does Smart911 improve the speed and effectiveness of 911 services and responses? Does Smart911 result in improved communications and better quality services, particularly to those who are nonverbal, hearing impaired, have cognitive or developmental disabilities, or do not speak English fluently?

Wave Three: These questions are recommended for the third wave of 911 research.

3.1 What is the degree to which alternative first responses increase or decrease burden on call center professionals? To what degree does the introduction of new alternative responder options slow down or speed up the triaging and call resolution processes?

3.2 How can existing national standards and protocols be catalogued and assessed to highlight best practices, as well as existing opportunities, gaps, overlap, difference, and conformance?

3.3 To what degree does the introduction of texting, video calls, and inclusion of photos by 911 callers affect 911 communications operations in terms call-takers' abilities to manage information efficiently? How do these new communication mechanisms and data sources affect the stress level of 911 professionals and their degree of compassion fatigue and burnout? How can those outcomes be anticipated and prevented or mitigated?

3.4 To what degree does call-taker alarmism vary by call-taker demographics and tenure? How does the level of call-taker alarmism impact decisions to route to a first responder versus an alternative responder? How does it affect first responder decisions to arrest or use force? What measures are effective in reducing call-taker alarmism?

3.5 What types of governance structures are most effective and efficient in terms of costs and harm reduction?

3.6 To what degree does reclassification of 911 professionals from administrative to first responder facilitate recruitment and retention, or increase job satisfaction, pay equity, and retention rates?

3.7 What are the most effective approaches to educate communities about accessing 911 and 988?

3.8 How does the introduction of texting, video calls, and inclusion of photos by 911 callers affect 911 communications operations in terms of facilitating better communications with the hearing and visually impaired and people with language barriers?

3.9 How does lack of cellular network coverage affect 911 accessibility in rural and tribal areas?

3.10 What is the difference in caller satisfaction with services rendered between 911 and 311 for the same call type?

- 3.11 What is the difference in the provision of appropriate follow-up services between 911 and 311 for the same call type?
- 3.12 What are the effects of anti-bias 911 laws on the number and types of calls of service and the ability of 911 professionals and ECC operations to document those calls accurately?
- 3.13 To what degree do call-taking and triaging facilitation and automation technologies yield more consistent and equitable responses and more effective service delivery? Are technologies developed in partnership with ECC professionals more or less effective?
- 3.14 To what degree does the addition of alternative response models affect the volume of 911 calls for police service and calls to 311 or other alternative hotlines?
- 3.15 To what degree should 988 governance mirror or differ from 911 governance models?
- 3.16 What role does governance play in communicating to various communities and demographics the existence and value of alternatives to 911 and the cases in which 911 should be used?
- 3.17 How can emergency communications systems be fortified against outages, network overload, and cyberattacks?
- 3.18 What would be the budgetary impacts both for independent multi-jurisdiction ECCs and for public safety agencies that manage emergency calling services of creating career and compensation parity for 911 professionals on par with those for field responders and public safety officers?
- 3.19 How might principles of behavioral economics be employed to incentivize 911 professionals from over-triaging? How might they be applied in the design of CAD user interfaces to streamline call-taking and encourage the use of alternative responders? What is the degree of their effectiveness?
- 3.20 What measures are effective in breaking down silos and encouraging greater understanding and cooperation among 911 professionals and field responders?
- 3.21 What efforts have been made to engage community members from high 911-use communities in PSAP governance and what have been the outcomes of those efforts?
- 3.22 What can we learn from tracking ECC migration to NG911 to better understand technological barriers and what factors support successful migration? Are some ECCs better equipped to make the transition to NG911 based on the entity in which they are housed (e.g., police, fire/EMS) or the governance structure under which they operate?
- 3.23 What measures are effective in reducing the stigma that 911 professionals and field responders may have with regard to people who use drugs?
- 3.24 Which structures and processes have strong public oversight and what are the advantages and disadvantages of such citizen-oriented accountability mechanisms?

## **TRANSFORM**911

- 3.25 How can governance promote NG911 transition to improve accessibility of emergency and crisis services, particularly to those with disabilities?
- 3.26 What has the impact of the NG911 grant program been in facilitating migration to 911? What are the remaining gaps in technical assistance and resource needs among ECCs nationwide?
- 3.27 What are the most efficient ways to detect and handle false alarms and accidental calls?
- 3.28 How can lags and lapses in service during the transition to NG911 be prevented or mitigated?
- 3.29 What are the privacy concerns and protections needed for people accessing service via 911 and 988?