



911 Technology and Infrastructure Transform911 Convening, March 3, 2022

During this convening session, workgroup chairs presented details of the following recommendations:

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

This document contains anonymous feedback from session attendees on the given questions following this presentation, conducted through the Mentimeter website. We suggest citing this document as “Public feedback during Transform911’s Alternative First Responders workgroup convening session on March 2, 2022.”

For additional information or inquiries, visit transform911.org, email us at transform911@uchicago.edu, or follow us on Twitter @T911HealthLab.

What is the potential impact of these recommendations?

Standardizing access to care

AI/ML can be very biased, specifically around zip codes

risk exposure to cyber attack and data breach if networks are not secure

Expense of converting systems when municipalities are cash-strapped.

standardization is beneficial, but ensure that location specific needs are accounted for

The most obvious impact would be financial and then one size may not fit all

Better Public opinion of Emergency Services, including 911 services.

Requiring access to data seems very reasonable.

Encourage consolidation of ECCs to improve access and technology

What is the potential impact of these recommendations?

More supportive if: this is supported by communities currently more distrustful of 911

redundant standards that aren't universally adopted, creating conflicting standards regimes

More supportive if some work could be done to "backwards train" callers that, for example, a person walking in their neighborhood with a hood is not, by default, dangerous.

political opposition to PSAP/ECC consolidation

I think this would help improve the technical qualifications of this role, and open up/be more attractive to other job backgrounds.

accountability of vendors and reduction in propriety services

Help hold vendors accountable

Better capabilities to compare data across the industry and empower local 911 officials to better understand their own operations through real-time data analysis.

Requiring access to data, while maintaining discretion, is optimal.

What is the potential impact of these recommendations?

Adoption of common data standards would go a long ways towards nationwide interoperability of emergency response systems.

Caution that not all technology is useful in processing 911 calls for service. Vendors generally develop technology for call centers and then try to apply it to 911. This is not always effective.

Greater interoperability and future forward vendor requirements could allow for greater flexibility, modularity, and risk mitigation to avoid vendor lock-in

YES to vendors being required to open data. It is not their data, esp if being paid for by tax dollars

Ensure people have similar experiences with 911 no matter where they live or what their emergency may be

data standardization could improve access to care and could provide faster access to trends

improved information sharing and situational awareness for improved outcomes

Upgrading equipment for PSAPs with low call volume is expensive. Alternatives such as consolidation (virtual or facility) should be considered.

As a researcher, I am sympathetic for the call for more/better data and the interest in AI/machine learning. I am concerned, though, that the public will not be supportive given the current convo surrounding these techs in social media + bias issues

What is the potential impact of these recommendations?

Fully support more open data to a much wider range of stakeholders without the burden of going through public records requests and multi-year old data.

Consistency across the continuum of the industry. Greater control of data.

improved decision making by ECCs to send most appropriate resources including alternative resources

The biggest objections are that one size does not fit all along with financial. If ECCs were state funded and oper it would put them more on an even playing field. It would not be dependent on individual agency needs and funding, or biases.

incompatibility of current 911 funding mechanisms with service-based fee models

A requirement is only as strong as the enforcement. How will vendors be held accountable to share call data?

Data is just data without context. The impact will be transforming the data into meaningful information that can be used to effect policy and operational changes to enhance response and outcomes.

Uniform data & greater access may prompt the question of effective analysis tooling - especially by small, underresourced eccs

Understanding various communication modalities when receiving calls from individuals with disabilities, including callers who are deaf, deafblind, hard of hearing and speech disabilities.

What is the potential impact of these recommendations?

Balancing data information and a tendency to develop bias based on that information could be a concern. Example someone who had noted medical information calls 911 for an incident not related to a medical problem. The call taker may make assumption

Uniform standards is key! Today we don't really know who calls 911 or why and how those calls are responded to. Standards around data collection and dissemination would help address this.

First, are there no current standards data today? Next, an ethics statement would be help but State, County, and/or local authorities will ultimately decide this. Many already this. Third recommendation WILL be driven by the market.

Dedicated shared model, if secure, would ensure that all new vendors, for ex, alternative first responders, could gain access to non-criminal emergencies. It would also ensure that calls can be responded to more quickly

I'm assuming most data we speak of in this context is aggregated, deidentified, and geo-located to 100-block coordinates? We must not use common excuses (eg. HIPAA) to shield data from innovators who may challenge the status quo of data shepherds.

Shared tools for efficiency and cost sharing requires careful consideration to back up system, as if one fails they all fail.

The impact would be to decentralize control over 911 so that not only PSAPs would have access.

Real time access to data by those authorized is already available in some areas. Vendors can be forced to do this through the contracting process...WA did it.

We must ensure use of data does not help government, institutions, and other players the ability to reinforce or otherwise strengthen systems of racism, gender biases, social hierarchy, or any combination of these.

What is the potential impact of these recommendations?

Standardization and interoperability could also enable more seamless integrations and transfers for the public requesting help across a range of needs and social services

Technology overload. 911 staff are required to make split second decisions. Evaluating excessive information not necessarily related to the reported incident could delay response and/or result in the incorrect response.

We already know Black and other clients receive substandard healthcare. We should ensure any use of data does not contribute to these issues but, help mitigate and eliminate them entirely. Hiding the data is not an answer.

Data without geocoding is largely useless. Any published data must at the very least include census tract of call for service.

Outcome data repositories/platforms that Computer Aided Dispatch systems can upload to

I didn't have a chance to share on the last slide. Data principles like the ones passed in the EU (GDPR) must be required.

AI/ML can also be helpful for follow-up services and to cue 911 pros to ask questions. One has more tools to guard against biases and other pitfalls of predictive analytics as a complement not substitute for human decision making.

California's repository for Racial Profiling data uploads from Records Management System is an example for setting platforms that can be applied nationally

Many of the biases associated with AI/ML are also mirrors of biases in actual service delivery. So retrospective bias analyses of ML results can be helpful in uncovering biases in human response we might otherwise overlook.

What is the potential impact of these recommendations?

I would like to recommend that 511 be included with 211 and 311

Invite community-based organizations serving people with disabilities, deaf, deafblind, and hard of hearing on tours of ECC.

Where should we look for inspiration related to implementation? (e.g. other communities, vendor requirements, and shared service models)

Cloud based energy systems

Request success stories from our 911 communities and share that information with others.

Other services, such as banking and hospitals for security of data and interoperation. Look at what works in the EU and other countries.

Connecting call for service (911) data is most useful when tying to actual disposition - crime report, transport to hospital, jail, etc. Without this we don't know if there was an actual crime, mental health crisis or other issue.

Look at the UK and other countries that have more centralized ECC operations and are using more standardized and modernized technologies

Look at other countries and their best practices

are there international communities that could be used as examples?

The federal Universal Crime Reporting (UCR) system maintained by the FBI is interesting but, summarizes crime data too tightly (to about 9 buckets). Having a centralized repository may be useful.

I would like to see standards, like NENA-STA-021.1-2021, adopted nationwide. There are, admittedly, challenges to doing this.

Where should we look for inspiration related to implementation? (e.g. other communities, vendor requirements, and shared service models)

eCityGov and CGAIT are regional shared service collaboratives in Washington and Colorado - <http://www.ecitygov.net/> & <https://cgait.colorado.gov/>

Possible support and/or encourage an APCO and/or NENA project related to obtaining and categorizing success stories.

California is an example for repositories that agencies Records Management Systems must upload to for Racial Profiling Statistics. This is neutral outcome data that is reported annually. Same can happen with other topical areas, ie, mental health

Learn with community members and users of the 911 system how they would like to access and learn about 911 - and design accordingly

National Incident-Based Reporting System (NIBRS)

On the 911/disposition (eg. crime) data each call has an identification number, ideally when a crime report is made it somehow references the call for service ID?

We should look to philanthropy to help support greater innovation beyond what government can reasonably pursue

Healthcare electronic health records-in its vision, discrete manufacturing's component, accident and repair history databases (while still covering privacy), financial services and supply chain systems-in their real-time data capture and sharing

Open311 and OpenReferral provides some examples of the possibilities and challenges of data standards and interoperability (open311.org and openreferral.org) in the 311 and 211 space

Where should we look for inspiration related to implementation? (e.g. other communities, vendor requirements, and shared service models)

Thinking about continuity of service and care - how do we have records attached to individuals and incidents - rather than fragmented and siloed between intercepts (e.g., 911, police/fire/ems, hospital, follow-up care, etc.)

It would be helpful to have standardized mental health crisis codes recorded (not just 'mental health' but, more descriptive codes, utilized so that crime data can include if and how mental health issues affected the call or outcome.

Health Care data systems are detested by doctors as they are focused on "how and what to bill," not how to care. SO big cautions as to motive of the data

Consider redundancy. Hybrid models with localized data and cloud based to help reduce cybersecurity concerns.

Look at social impact bonds and other creative funding mechanisms

National Information Exchange Model (NIEM) Community

Encourage collaboration between vendors, trying to reduce competition and proprietary elements in services to access emergency crisis care

A definitive path to funding the recommendations.

Perhaps a little more detail about how they could be accomplished.

Where should we look for inspiration related to implementation? (e.g. other communities, vendor requirements, and shared service models)

The problem with APCO/NENA standards is that they are optional and not universally used or embraced by PSAPS

Smartphone devices and operating systems offer alternatives to achieve the goals of NG-911 and people-centric ECC's as 911 and emergency notification functions are built into the core of the current generation of phones.

Clearer definition of the audience — are these recommendations going to the 911 community, to government, or just the public discourse?

What would make you more supportive of the recommendations?

Heavy public engagement. Help educate the public how this data could help address disparities and why policy and practice change is needed.

Federal standards and funding.

Knowing you had a group of pilot PSAPs/ECCs who were on board to test new ideas

A recommendation for how to fund them

If there were federal funding available for 9-1-1 in connection with the data being provided for analysis purposes.

Federal incentives and requirements for vendors

Knowing how/when they will be shared with elected leaders, etc.

If communities that are more distrustful of 911 were part of the process from the beginning

Include cyber and network security requirements

What would make you more supportive of the recommendations?

Involvement of community groups/members in the decision making and design processes

regulations/laws to require states/municipalities to adopt standards

Break some of these items apart - it appears you are trying to lump a ton of things into one bucket and they don't appear to be all something that can be painted with a broad brush

Federal regulation of baseline criteria for services and technology

If there could also be some AI, etc to help with caller education, for example, someone in a hood walking in your neighborhood is not by default dangerous. Gentle education could be possible

If the impacted stakeholders have a say on the impact to their workloads and abilities to fulfill the expectations

Improved emergency response and a reduction in undesirable outcomes. This could improve relationships between first responders and the community.

Cleared definition of the audience — are these recs getting pushed toward government, 911, or just the public discourse?

Grants or funding that supports the development, research, and pilot/test of the innovation

What would make you more supportive of the recommendations?

If there was a way to ensure interpretable transparent data capture and AI analysis, and backpropagation access to ensure that data is not misaggregated and misreported to government, thereby potentially being abused

program evaluations to ensure new programs are working as intended and cost-effectively

Clear support by state and federal institutions in a position to help enforce guidelines & regs coming out of these proposals.

National support and funding with more support and dissemination for demonstration projects

Answering questions like the race of the callers and the race of the subject of interest would be valuable to understand. There are ways that this could be done by accredited researchers. My suspicion is far more calls are made on Black subjects.

More granular acknowledgement of the ongoing and upcoming work inside the 911 community itself. You're doing good work so far but there's a lot more going on than seems to be captured here.

Technology access for all community members - ensuring all technologies are accessible to the deaf and hard of hearing community, individuals who don't speak English as a first or primary language, and others who may be fearful of calling for help

Demonstration that the problems they are meant to solve lead to loss of life, worse outcomes for the community, higher attrition among 911 professionals, advance the calls of community groups calling for reform, aren't cost prohibitive etc.

The first step in enacting and finding success with any of these recommendations will need to start with a new nationally (government, agencies, and public) recognized standard of what 911 and ECCs are and do.

What would make you more supportive of the recommendations?

Making sure the "Mission Creep" doesn't interfere with basic emergency services access

prioritization for psaps/agencies to adopt some (but not all) recommendations to ensure agencies with limitations focus on the most important changes/updates/recs.

Look to partner with other organization, or emulate their approaches. Insights Association, has proactively addressed internet privacy and fraud, and have engaged the FTC per their opinion Congress may take on less in an election year.

Federal regulation is needed

National data collection and standards - not just recommended but required

Push for federal standardization

On race of caller - researchers could combine known cell data with marketing and credit data where race of cell owner could be predicted with high credibility.

Once better fleshed out. Input and support from other agencies. Such as SAMS for security. Another example: the hospital and insurance systems to guarantee HIPPA compliance and interoperability of EMS information as patients are transferred.

Pilot or prototype any new innovation and allow others to see what worked and what didn't before standards are developed

What would make you more supportive of the recommendations?

Definitely some grant support to assist in agency compliance. Getting the vendors involved as interoperability may not be seen as the best business model.

To more authentically attack systems of racism and bias we must attach 911 call for service to NIBRS, to criminal prosecution, and any kind of punishment. A fully longitudinal perspective would provide significant value to genuine efforts.

FL has a state statute requiring interoperability for both radio communications and call handling. Funding and vendor interoperability will be the roadblocks.

On race of caller - NIBRS data tracks race of suspect and victims. By tying call data with NIBRS data there are many insights, e.g. disposition of suspect, use of force... etc. & later down the line the final disposition - jail, plea, probation etc

Approved vendor lists of tech providers that are aligned with these goals

There need to be solid policies and procedures to support this as well.

Austin PD is good example of telehealth/nurse navigation in the ECC

Some states - counties don't even have basic 911 services. The fed's need to fund shoring up those states that have counties that can't fund even basic services so that the playing field is even... Leaving it on the states is not the solution

PSA Announcements multiple outlets - 911 vs 311 etc