**Next Generation 9-1-1: Media Communication Line Services [Emergency Video Sign Language and Communication Assistance Line Services (EVSLCAS) ]**

**December 2012**

**SUMMARY**

The Emergency Access Advisory Committee (EAAC) recommends that the FCC and DOJ take appropriate steps wherever necessary to ensure that Public Safety Answering Points (PSAPs) will hire or contract with qualified sign language interpreters and other communication assistants in order to provide effective communication during 9-1-1 emergency calls.

Direct access to NG9-1-1 using video technologies will require multi-video conferencing. This will give telecommunicators the opportunity to assess the caller’s surroundings and to send appropriate assistance. Also NG9-1-1 will record the video of multi-video conferencing.

Communication access includes various combinations such as video, voice and text. This gives individuals with disabilities choices on which communication would help them to communicate effectively.

The communication line services should include qualified interpreters and communication assistants who must successfully complete training on how to interpret or assist parties effectively, accurately and impartially in emergency situations.

Among the steps include development of certification standards for qualified personnel, performance standards; and standard operating procedures that require direct access as opposed indirect access (e.g. relayed calls). It is recommended that the line service is to be a national recognized certified standard.

The purpose of NG9-1-1 is to accept direct connect to all types of calls from different devices and anywhere which include video, text, voice, and data. Communication technologies are rapidly changing and expanding. People with disabilities are following these trends as they meet their communication needs. It is critical that they are able to call 9-1-1 directly in every case. Video technologies are the most common mode for people with disabilities. They feel secure using that technology to call 9-1-1 expecting telecommunicators to provide effective services.

This paper will describe recommendations for procedures, protocols, and guidelines for setting up a line service.

1. **Introduction**
2. **Scope**

The U.S. population currently includes more than 54 million people with disabilities, including people who are deaf, deaf-blind, late deafened, hard of hearing, or who have speech disabilities .. For these people, calling for emergency assistance via NG911 may require use of specific communication modalities that differ from the general population.

The original 911 system, introduced in 1968, was based on wired telephones connected by copper landlines. Since then, the system has been updated to include features such as automatic name and location identification and advanced call routing. Consumer electronics development, however, have outpaced the advancements to the legacy 911 system. More communication technologies are allowing citizens to transmit not only voice calls, but text messages, pictures, video, and data.

Today, there is consensus among 911 stakeholders that it is time to update the 911 infrastructure to enable the transmission of this type of digital information from callers, to the 911 center, and on to the emergency responder community. Next Generation 911 (NG911) is a system of 911 services and databases that run on an Internet Protocol (IP) based network, which allows automatic and advanced sharing of digital data among all public safety responders, public safety answering points (PSAPs), emergency management, traffic operations, and other entities. Telecommunicators will be able to process all types of calls including non-voice (multimedia) messages as well as utilize several modes simultaneously on the same call.

A very popular communication technology currently used is video. Webcams are included in many devices such as computers (desktop, laptop), tablets, smart phones, and stand-alone computers.

Due to rapid changing communication technologies, Media Communication Line Services (MLCS) is to be established to receive and process 9-1-1 calls as part of transition plan from E9-1-1 to NG9-1-1 environment to allow individuals to make direct 9-1-1 video calls. In order to use video capabilities, both MLCS call centers and PSAPs would need to be IP-enabled in order to have interoperability.

This document covers proposed guidelines and recommendations of MLCS that would provide significant support to individuals with disabilities who use video.

The 9-1-1 registry system allows individuals to provide information about their health medical, language or communication needs to PSAPs at a local level. This information is used for the purpose of providing effective and fast emergency services by using forms of data associated with a call, a location, a caller and a PSAP available to emergency responders. This same information can be used to assist the PSAP in determining the communication modality of the caller.

Video technologies are increasingly becoming popular and it is expected that it will become a common mode for everyone. There will be a high possibility that individuals will call 9-1-1 directly using video technologies. Some of those callers could be people with disabilities.

Additionally, non-English speaking people have been calling 9-1-1 directly for many years and PSAP telecommunicators have been connecting these calls with language services in order to effectively communicate. This becomes in essence a conference call. These non-English speaking callers are not required to pre-register. Telecommunicators simply assess what language is necessary. If the telecommunicator is not able to determine the language, s/he transfers the call to contracted language services for assistances. Language services have someone who does assessments before transferring the caller to an interpreter speaking a similar dialect. A similar service and process should be available to people with disabilities who use varying modalities for communication such as but not limited to telephone captioning or video telephones for American Sign Language (ASL).

Finally, the results of the survey “*Access to 9-1-1 for People with Disabilities”* as part of the 2011 *Report on Emergency Calling for Persons with Disabilities* presented by the Emergency Access Advisory Committee revealed that 77% of respondents who were people with disabilities felt that the need to “communicate with 9-1-1 directly instead of through a relay service” was very important. Proposed guidelines of this document reflect that need.

1. **Needs of Media Communication Line Services (MCLS)**

The concept of Next Generation 9-1-1 (NG9-1-1) is to include various types of communication modes such as text, voice, video, data based on the needs of callers. Also multimedia such as multi-conferencing are included.

Communication technologies continue to evolve toward the use of digital technology. Currently the Enhanced 9-1-1 system, which is analog based, is not compatible with text, video or other IP-based technologies. Therefore, NG9-1-1 is being developed in order to keep pace with communication technologies that the public uses daily. NG9-1-1 will be IP-enabled.

When the NG9-1-1 is deployed, it will give individuals who are deaf, deaf-blind, late deafened, hard of hearing, or who have speech disabilities the opportunity to call a PSAP directly rather than via Internet-based relay services such as Video Relay Service and Internet Protocol Relay Service.

Since applications (apps) for text and video are commonly used by many individuals today, there is also a greater possibility that users will use them to call 9-1-1 directly (once NG9-1-1 has been fully implemented). Individuals with disabilities would prefer to call 9-1-1 more quickly than is possible through current apps. Some apps may be commonly used and/or designed for contacting 9-1-1. As discussed in other EAAC recommendations, 9-1-1 callers with disabilities need direct access to PSAPs using the same devices and methods they use every day.

Individuals are not required to complete their caller profiles (see Section X) in order to get specific language translation and communication preferences for 9-1-1 calls. When the PSAP receives a call from a caller, sometimes the answering telecommunicator can identify the language. If not, the telecommunicator would connect to a contracted language services and someone there will determine the emergency caller’s language before connecting to an appropriate interpreter.

1. **Difference between Media Communication Line Services and Video or Telecommunications Relay Services**

Today, an individual who uses VRS dials 9-1-1 on their device, but is first connected to a video interpreter (VI),then the VI connects to the PSAP (sometimes there is another connection to a third party in-between the VI and the PSAP too). The FCC requires that individuals are to given a local 10-digit number after registering with their preferred relay service(s). Registration includes the caller’s name, physical address and 10-digit number. When the individual calls 9-1-1 via VRS, the caller information should be electronically transmitted to the PSAP’s ANI/ALI screen. Sometime the caller information does not appear on the ANI/ALI screen because the call goes through different line other than 9-1-1 line.

Each relay service provider is required to train their sign language interpreters on proper handling of 9-1-1 calls –however, the content, depth and length of training varies from one provider to another – there are no training standards to date. Each provider develops their own protocols for how the calls are to be handled. There is also no national standard for relay service providers handling/processing of 9-1-1 calls. Also, there are no minimum requirements or standards to determine whether sign language interpreters/ are qualified to interpret 9-1-1 calls. See diagram in Appendix B.

Additionally, Telecommunications Relay Services (TRS) is accessed via State contracted TRS services which connects TRS and Communications Assistants (CAs) to convey text and audio conversations back and forth between deaf, hard of hearing, or speech disabled consumers either through captioned telephone or TTYs.

If implemented, MCLSMedia Communication Line Services (MCLS) would work like any language services with which PSAPs have contracts. When a video call is connected to 9-1-1 directly, the telecommunicator connects the caller with the EVSLCAS call centers –the same concept as when the telecommunicator connects to language services whenever a foreign language speaker calls the 9-1-1. See diagram in Appendix C.

Like other PSAP Telecommunicators, the Sign Language Interpreters and CAs will be required to go through physical and psychological evaluations to determine their capability to perform job in stressful environment. SLIs and CAs will be intensively trained to handle video 9-1-1 calls using different communication modalities to accommodate the needs of individuals with disabilities. Also, telecommunicators should be trained to handle video calls as well as auditory communication modes.

Multi-video conferencing will be included to give telecommunicators the opportunity to assess the caller’s surroundings and send appropriate assistance. NG9-1-1 will record the incoming video of multi-video conferencing calls.

Additionally, many consumers who are deaf or hard of hearing who use ASL as a secondary language (oral or late-deafened) may benefit from using both video for ASL and speech reading and captions. MCLS should have the ability for the telecommunicators to connect in multiple ways including video or multivideo (see an interpreter and the telecommunicator synchronously) and captions.

Communication via video is popular with the public and more video software programs are becoming available. Communication during times of emergency is critical. However, many individuals may not communicate effectively due to their disabilities, injury or shock.

1. **Media Communication Line Service(MCLS) call centers**

PSAPs that receive calls from callers using varying communication modalities (video phones, caption phones) will have seamless multi-conference connection abilities to any of the nation’s MCLS call centers.

In order to effectively provide direct connect 9-1-1 services to all people using various communication modalities, the FCC, DOT DOJ, and PSAPs establish multiple prospective MCLS call centers in order to ensure that any PSAP can connect multi-conference services in a single call as required. Criteria for technical requirements, operational requirements, training requirements, and funding continuity must be considered prior to establishment.

Established MCLS call centers should be able to provide video and text language services for people with disabilities who use varying methods of communication including but not limited to American Sign Language and captioning,. MCLS call centers may or may not be affiliated with VRS or TRS agencies but must have ALL VIs and CAs with established training credentials for meeting the needs of emergency callers using varying communication methods.

It is strongly recommend establishing at least three MCLS call centers in different geographical locations. MCLS call centers should also include contingency plans in case of power outage, disaster and other unforeseen events. Those Call Centers should be certified by FCC and appropriate federal agencies.

Accreditations include minimum set up and training credentials for meeting the needs of emergency callers using varying communication methods as described in following pages.

1. **General Requirements for both MCLS and PSAP**

PSAPs should have the ability to instantly connect to any of several MCLS call centers through the United States. Media Communication Line Services (MCLS) call centers should be strategically located throughout the country. Direct connect for these call centers should be available for all PSAPs. PSAP telecommunicators should have the ability to connect to MCLS in a timely manner.

In order to have multi-video conferencing including text and voice, both PSAPs and MCLS agencies should include the following list in their system for smooth flow:

1. Network connectivity to different network system at same time
2. Location identification for mobile devices (GPS)
3. Redundancy
4. Overflow to different places and connection abilities to multiple MCLS call centers.
5. Ability to connect to different devices
6. Timeline for implementation including how each PSAP will transition from using VRS or TRS to direct connect to MCLS call centers for direct service for people with disabilities.
7. Quick and smooth connection from PSAP to MCLS Call Center
8. Protocols and codecs for audio, real-time text, video and text messages (all or subset of NENA i3 enumerated and NENA 13 standards)
9. Multi-video conferencing including voice and text for all parties available
10. Media quality standard for video, audio and text. (need to set up minimum requirement on high quality for download and upload)
11. Technical factors adaptive to user's connection capacity (especially video bandwidth adaptation).
12. Possibility to handle call transfers and other call operations
13. Security in technical communication
14. Queue information in video and text
15. Privacy and security in studio arrangement
16. Include different communication modalities (text, video, voice, data)

1) Types of communication needs (general)

a) American Sign language (ASL)

b) English modalities (SEE, spoken-only, etc)

c) Sign language to user, text (real-time text or messaging)

d) Voice & sign language with captions

e) Voice & captions

f) Deaf-Blind (e.g. sign language one way, text the other, or sign

Language one way and speech the other)

g) Speech support

h) Language, memory and cognitive support (problems with memory

 concentration, etc)

1. **Standards of Media Communication Line Services**

MCLS shall maintain at a high level with skilled Sign Language Interpreters and communication assistants to provide effective communication services between callers and telecommunicators during crisis calls. The MCLS should include the following list:

1. Line Services
2. Availability of interpreters and/or services 24/7
3. Deaf Interpreter available to provide assistance to interpreters
4. Length of time for connection to interpreter – Real time (without caller profile)
5. Teaming
6. Response time (mean value and max for -say 97% of the calls) (caller profile)
7. Redundancy for catastrophic situations. Studios in different locations. Redundant communication routes.
8. Liability
9. Consistent policy regarding problematic situations
10. So that when reporting an operator or when/if needed in the future we know which operator handled the call. Or if disconnected can ask
11. Call case logging
12. Media recording and retrievability and chain of custody of recorded evidence
13. Fees

1) Stand-by

2) Minutes for calls

**IV. Minimal Skills**

The role of Sign Language Interpreters (SLIs) and Communication Assistants (CAs) is to translate, transliterates or interpret conversation between one or more end users.

The MCLS agency is responsible for hiring qualified and skilled VIs and CAs to handle relayed 9-1-1 calls between callers using different modalities and 9-1-1 telecommunicators. Also they would be required to take intensive training.

Both SLIs and CAs must demonstrate competency in:

* Typing (60 wpm)
* Spelling (how many errors acceptable?)
* Interpretation of ASL (visual and text)
* Knowledge of hearing and speech disability cultures
* Etiquette

It is critical that both Sign language interpreters and CAs should possess the following specified skills for providing effective communication skills during emergencies like other PSAP Telecommunicators, the SLIs and CAs will be required to go through physical and psychological evaluations to determine their capability to perform job in stressful environment. SLIs and CAs may also be required to go through drug screening, criminal history check, polygraph exam, and/or computerized voice stress analysis. SLIs and CAs will be intensively trained to handle video 9-1-1 calls using different communication modalities to accommodate the needs of individuals with disabilities.

**Certification**

The requirement that qualifies sign language interpreters or communication assistants to work in Media Communication Line Services agency is to have high skills to handle 9-1-1 calls.

Sign Language Interpreter: According to ADA, a “qualified” Interpreter is able to interpret effectively, accurately and impartially both receptively and expressively, using any necessary specialized vocabulary. (Between English and American Sign Language). The interpreter must possess certification of National Interpreter Certification (Master, Advanced), CI and/or CDI from Registry of Interpreters for the Deaf (RID) or certification from state agencies.

Communication Assistant (CA): There is no certification available for communication assistants.

However Sign Language Interpreters and Communication Assistants must have completed the training specifically designed skills qualified for handling 9-1-1 calls from people who are disabled as described in the next few pages. Additional certification and training criteria should be established for MCLS call centers.

A team of qualified and neutral individuals should be established to evaluate SLIs and CAs for skills and qualifications. People who evaluate should be neutral. Recommendations of evaluators shall be teachers of ASL, teachers/board members of state deaf schools (mainstream), members of ASLTA, officers of Deaf organizations/clubs. It is not advisable to use people from interpreting agencies due to possible conflict of interest.

Questions from Suzy Rosen Singleton:

For instance the draft identifies the need to include deaf interpreters to provide assistance to VI interpreters. Further discussion may be needed to clarify this requirement. "Etiquette", "has taken Deaf studies or knowledge of Deaf culture from the early 1900's to current year" and "hearing and speech disability cultures" are required areas of knowledge, but no mention appears to be regarding competency in ethics, best practices, and the Code of Professional Conduct of RID. Consultation and involvement of interpreters appear to be discouraged in this draft, so the question is what may be the field's existing testing protocols in evaluating interpreters in general? Are there possible precautions that may be taken to ensure neutrality of interpreters in order to allow such individuals to serve as members of the evaluation team? Interpreters are being asked to step out of role in providing independent observations and becoming potential witnesses, so it may be critical to consult with SMEs and professional interpreter services organizations such as the RID to ensure best practices are implemented.

**Minimum qualification (error rate of text, rate of delay)**

Handling 9-1-1 calls can be highly stressed and require SLIs and CAs to be able to relay messages both receptive and expressive effectively between both parties.

Minimum Experience:

Sign language interpreters

* 5 years or more community interpreting experience (consisting of at least 2 years of law enforcement and/or medical emergency interpreting services)
* At least 1,000 hours of in VRS experience
* Speak word by word or translate to English while reading text messages from the caller
* Have taken Deaf studies or knowledge of Deaf culture from the early 1900’s to presence
* Vast knowledge of classifiers including facial expressions, body language, etc

Communication Assistants

* 5 years or more as speech therapist, speech language pathologist or have worked with people with speech disabilities
* At least 1 year experience in Speech to Speech (traditional) with more than 1000 hours
* At least 1 year experience in Speech to Speech (video) with more than 1000 hours
* At least 1 year experience in text relay with more than 1000 hours
* Knowledgeable of speech patterns (neurological and language)
* Speak word by word or translate to English while reading text messages from the caller (minimal error?)

**Communication capability requirement**

The Sign Language Interpreters and Communication Assistants must possess those following skills to be qualified as employees with the MCLS agency.

Sign Language Interpreter:

* Must be able to handle callers with various communication modalities (sign, voice, text)
* Must be able to use receptive and expressive skills in regionals signs, signs for names & locations
* Must be able to speak word by word or translate to English while reading text messages from the caller
* Must be able to work with callers who have other disability beside hearing loss such as vision, mental health, minimal language, etc

Communication Assistant:

* Must have an understanding of various type of speech disabilities (neurological and language).
* Must also possess clear and articulate voice communications
* Must be patient
* some callers may have long pauses
* some callers may not be clear so therefore they would be asked to repeat or to clarify
* some non-disabled people may be frustrated
* Must have strong listening skills
* some callers may have garbled speech

**Skills Evaluation (voice, sign, type)**

It is recommended that interpreters and communication assistants be evaluated to ensure that they are appropriate for handling 9-1-1 calls.

Also it is recommended that interpreters and communication assistants are to be tested at least every 6 months.

**NEED TO DISCUSS MORE ON SETTING UP A GROUP EVALUATORS/SUBJECT MATTER EXPERTS (SMES**) – How to choose appropriate people for team: Individuals who evaluate should be neutral. Recommendations of evaluators shall be teachers of ASL, teachers/board members of state deaf schools (mainstream), members of ASLTA, officers of Deaf organizations/clubs. It is not advisable to use people from interpreting agencies due to possibility of being biased.

Interpreter:

* Voice translation
* ASL translation
* MLS translation
* Classifiers

Communication Assistant:

* Revoicing
1. People with speech disabilities
2. People who are deaf, deaf-blind or hard of hearing

CAs should be evaluated for their re-voicing people with various degrees of speech intelligibility.

**V. Training**

When a caller calls a PSAP who is deaf, deaf-blind, hard of hearing, who has a speech disability or who has another disability, effective communication is required. PSAP telecommunicators should be properly trained on methodologies for connecting to the MCLS call center as required. If a caller is seen as well as heard by the telecommunicator or if text communication is received, the PSAP call taker should be aware of how to effectively connect to MCLS call center to conference and complete the call and provide service in the most expedient and seamless way possible.

SLIs and CAs must receive training from accredit training program recognized by state or national 9-1-1 organizations within 6 months of appointment.

**a) Sign language Interpreters**

A sign language interpreter shall be both available and qualified when NG9-1-1 is deployed. This will help ensure the proper use of 9-1-1 services and expedite effective communication and response for services. Qualifications include but are not limited to:

1. training on the procedure for connecting and multi-conferencing an interpreter or CA to a consumer and a PSAP telecommunicator.
2. emergency communication training for interaction with callers, telecommunicators, and emergency responder personnel.
3. emergency and 9-1-1 use protocol training for emergency response similar to training that is was provided to telecommunicators. SLIs will receive training on procedural matters and incident command for emergency responders. This will help SLIs understand the needs of responders on the scene and what needs to be communicated to the caller and how to interpret it properly
4. understanding of 911 and emergency responder awareness (e.g., fire, law enforcement, emergency medical services [EMS]), be aware of 911 call handling methodologies. This training will include medical terminology (and appropriate signs), legal terms, procedures, and local agency names.

Additionally, incidents that are likely to result in high volume calls (e.g., automobile accident on a crowded roadway, missing persons, etc.) should be described and discussions surrounding how these call types affect these processes should occur. These scenarios will provide SLIs with an overview of actions and decisions being made by the PSAP telecommunicators and allow for them to provide better transparency to both the caller and the telecommunicator.

1. Basic first aid and cardiopulmonary resuscitation (CPR) training. The training would help interpreters to understand techniques and procedures described by a telecommunicator during a relevant emergency call (e.g., choking, checking a pulse, etc.) and also to provide appropriate signs to callers.
2. Training in critical incident care. Critical incident care refers to assisting callers with critical incident stress as required (appropriate tone and statements to a survivor of an incident or someone who is assisting a survivor. Critical incident stress also refers to self-care for the SLI or CA and stress management in dealing with vicarious trauma (See Section VII – Critical Incident Stress).
3. Trained in regionally appropriate signs, name signs, and signs for specific locations and people.
4. Trained in Deaf culture from the early 1900’s to current year

**b) Communication Assistant–**

A communication assistant (CA) should be available for emergency communications through NG – 911 for people with hearing loss and a limited/ no proficiency in American Sign Language (ASL). CAs should be both available and qualified in the same areas as a sign language interpreter to provide functional equivalency for communication through, but not limited to oral interpreting, written captions, or any combination.

While there is not a required length of training for Communication Assistants in their current roles, the FCC requires that all CAs be sufficiently trained to effectively meet the specialized communications needs of individuals with hearing and speech difficulties. CAs are required to possess competent skills in typing (minimum of 60 words per minute), grammar, spelling, interpretation of typewritten ASL, and familiarity with hearing and speech disability cultures, languages and etiquette. CAs must also possess clear and articulate voice communications.

CAs should receive more extensive training for handling 9-1-1 or emergency calls through a MCLS call center. CAs should receive training and evaluation in the following areas:

1. A CA will receive training on the procedure for connecting and multi-conferencing an interpreter or CA to a consumer and a PSAP telecommunicator.
2. A CA will receive emergency communication training for interaction with callers, telecommunicators, and emergency responder personnel.
3. CAs will receive emergency and 9-1-1 use protocol training for emergency response. SLIs will receive training on procedural matters and incident command for emergency responders. This will help VIs understand the needs of responders on the scene and what needs to be communicated to the caller and how to interpret it properly
4. CAs should have an understanding of 911 and emergency responder awareness (e.g., fire, law enforcement, emergency medical services [EMS]), be aware of 911 call handling methodologies. This training will include medical terminology (and appropriate signs), legal terms, procedures, and local agency names.
5. Additionally, incidents that are likely to result in high volume calls (e.g., automobile accident on a crowded roadway, missing persons, etc.) should be described and discussions surrounding how these call types affect these processes should occur. These scenarios will provide CAs with an overview of actions and decisions being made by the PSAP telecommunicators and allow for them to provide better transparency to both the caller and the telecommunicator.
6. CAs should obtain basic first aid and cardiopulmonary resuscitation (CPR) training. The training would help interpreters to understand techniques and procedures described by a telecommunicator during a relevant emergency call (e.g., choking, checking a pulse, etc.) and also to provide appropriate signs to callers.
7. CAs will receive training in critical incident care. Critical incident care refers to assisting callers with critical incident stress as required (appropriate tone and statements to a survivor of an incident or someone who is assisting a survivor. Critical incident stress also refers to self-care for the r CA and stress management in dealing with vicarious trauma (See Section VII – Critical Incident Stress).
8. CAs will be trained in regionally appropriate names and specific locations or terms.
9. CAs will be trained in Deaf/Hard of Hearing culture from the early 1900’s to current year.

**c) Telecommunicators**

Telecommunicators should be trained to handle video calls as well as auditory communication modes.  Multi-video conferencing will be included.  This will give telecommunicators the opportunity to assess the caller’s surroundings and to send appropriate assistance.  NG9-1-1 will record the video of multi-video conferencing.

PSAP telecommunicators should be provided with training to provide effective communication for consumers using alternative communication methods. Training must include but is not limited to:

1. procedure for connecting and multi-conferencing an interpreter or CA to a consumer and a PSAP telecommunicator.
2. Explanations and background of the roles/responsibilities of SLIs and CAs

Telecommunicators should speak directly to the caller and assist in seamless communication whereas an interpreter or communications assistant is as transparent as possible. In other words, telecommunicator should not speak to the interpreter and say “tell him/her this or that.” Questions or comments should be made as if no interpreter were present. Training so all understand this should take place.

1. the policies and procedures for connecting to an interpreter or communications assistant as needed. Call takers should be trained on identifying callers who may have the need for an interpreter or communications assistant.
2. Protocols for handling the lag time while finding the language, ASL, or communications assistant and connecting to an interpreter or CA (and acceptable rate of delay).
3. procedures and scenarios for the possible lag time between the interpreter or communications assistant and the caller before they convey the information.
4. use of short sentences and simple vocabulary and short phrases to convey questions and instructions. Simpler words such as, instead of “conscious” use “awake.” In EMD are allowed to enhance so after read the sentence so then if no understanding can be rephrased.
5. records retention procedures, the (possible) availability of caller profiles. Training should include how to keep records of relayed calls including specifics on type of communication modes being used and evidentiary chain of custody.
6. interpreters will communicate every word of the conversation.
7. basic overview of the language differences between spoken language and ASL, such as the importance of facial expressions, classifiers, and the different syntax of ASL.
8. all people who use communication assistance do not have equivalent knowledge and proficiency with varying modalities of communications. i.e. false statements: “all people who are deaf or hard of hearing read lips”, or “all people who are deaf or hard of hearing know sign language” or “all people who are deaf or hard of hearing have an equal understanding of written English and can read captions, etc.”

**Simulations:** Telecommunicators, SLIs and CAs will participate in training drills, table top exercises, and simulations to prepare them for assisting people who are deaf, deaf-blind, or hard of hearing.

**Learning methodologies:** Some education or training may be both efficient and cost-effective of done through online training methods. However, collaboration with other members of the PSAP community makes some face-to-face training scenarios the optimal method. A blended learning path for all individuals is recommended.

**MCLS:** The use of Media Communication Line Service call centers directly from the PSAP as opposed to relay services saves valuable time in an emergency. MCLS can be effective if all users are properly trained in uniform procedures.

**Resources:** Multiple resources are available to MCLS to engage in these types of training efforts. MCLS should work with local PSAPs to coordinate training efforts or to look for recommendations for outside training courses. With the transition to Next Generation 911 (NG911), training courses and resources for video emergency calls should become more widespread and uniform. State and local chapters of the National Emergency Number Association (NENA) and the Association of Public Safety Communications Officials (APCO), as well as the National Academies for Emergency Dispatch (NAED) provide additional information on training courses, training standards, and additional detail on any of the described topics.

**VII. Critical Incident Stress Management for Sign Language Interpreters and Communication Assistants**

Proper stress management methods and training for sign language interpreters and communications assistants is essential to protect their health and well-being. By being exposed to video during an emergency call, sign language interpreters and communications assistants are potentially exposed to traumatizing events in a way public safety answering point (PSAP) personnel currently are not. Current research is beginning to show a correlation between emergency call handling and symptoms of post-traumatic stress disorder (PTSD) and researchers believe that the addition of video to a call will only compound these effects, in particular for PSAP personnel. It is important that sign language interpreters and communications assistants are provided with proper stress management training and proper outlets to help cope with stressful situations.

A March, 2012 report published in the Journal of Traumatic Stress discusses findings that suggest that physical exposure to an incident may not be necessary to cause symptoms of PTSD in call-takers. With the advent of Next Generation 911 (NG911), researchers and the 911 stakeholder community, including the Federal Communications Commission’s (FCC) Communications Security, Reliability and Interoperability Council (CSRIC), are concerned that the addition of video to emergency calls could have a negative impact on call taker emotional wellbeing. These are concerns that are currently faced sign language interpreters and communications assistants.

Ongoing stress management training is essential for sign language interpreters and communications assistants to be able to perform their job at the high degree necessary to provide the service required during an emergency call. This type of training provides Sign language interpreters and communications assistants with scenarios that can cause stress, how to perform during these situations, and how to cope with the situation in the hours, days, and weeks following the event. Trainees are also provided with resources (e.g., hotlines, reading materials, councilor information, etc.) to provide assistance following a traumatic incident.

In addition to ongoing stress management training, there are multiple tools that Sign language interpreters and communications assistants can leverage to aid in coping with stressful incidents. Comprehensive critical incident stress management (CISM) programs can be implemented that focus on peer driven support immediately following an incident with periodic follow-ups to ensure personnel are handling stress in a healthy manner. Peer support and an open dialogue about the different ways to deal with stress in the work place can greatly improve effectiveness of stress management programs. Additionally, mentoring programs provide guidance to new staff and allow for seasoned staff to provide support from an experienced source. Group or individual counseling sessions allow for discussions to occur in a safe place with a professional trained in helping communications professionals dealing with extremely stressful and emotional working environments.

 http://onlinelibrary.wiley.com/doi/10.1002/jts.21687/abstract

 http://transition.fcc.gov/pshs/docs/csric/CSRIC-WG4B-Final-Report.pdf page 33

**VIII. Quality Assurance**

a) Feedback method on the services rendered.

b) Statement in the contract that gives right to not use a specific interpreter again.

c) Electronic avenue to report issues quickly after or during a call.

**IX. Tape Evaluation for Legal purpose**

1. PSAPs tape and store video conversation for certain period of time according to state or local law
2. Who evaluates the tape?
3. Internal

\*\*\*How many people on team to evaluate the tape? Deaf? Hearing? Speech Disabled? People who evaluate should be neutral. Recommendations of evaluators shall be teachers of ASL, teachers/board members of state deaf schools (mainstream), members of ASLTA, officers of Deaf organizations/clubs. It is not advisable to use people from interpreting agencies due to possible conflict of interest

1. Court – tape may be requested or be subpoenaed for legal purposes. Tape may be evaluated by request.

MCLS call centers should be required to review and maintain caller conversations in the same manner as any PSAP for training and evidentiary requirements.

**X. Caller Profile (registry)**

Generally, it is not necessary for anyone including individuals with disabilities to register with 9-1-1. The main goal of NG 9-1-1 to process all types of emergency calls including non‐voice (multi‐media) messages. They, like any non-disabled individuals, can choose to register or not to register with their local entity. It is essential that everyone should be informed on the pros and cons of registering with 9-1-1. A caller profile registration must be voluntary and can save valuable seconds in emergency communication by immediately connecting the caller to the appropriate communication assistance in the most seamless method possible.

The privacy and confidentiality of persons with disabilities must be respected. There are many issues around this type of data due to HIPPA laws and whenever it becomes available, the caller will have to indicated in their information date that it is permitted to release to whomever is authorized (lots of discussion on “authorized” – many believe only EMT or licensed medical person should obtain the data and not 9-1-1 call takers or dispatchers.)

Caller profile registrations may help to eliminate some educated guess work by the telecommunicators as to what communications assistance is required (ASL, captions, oral interpreter, Spanish or other languages). PSAPs should explore and collaborate with local communities on the best practices for creating and maintaining caller profile registrations. PSAPs should work with individual companies and consumers to acquire access where possible of user profiles to eliminate redundancy. PSAPs should work with local community groups to assist in maintaining caller profiles. It is recommended that user profiles are created and used by the PSAPs; however, the maintenance of the profile should be the responsibility of the individual consumer, renewed a minimum of six months.

For callers with disabilities who have registered with 9-1-1, their calls will make a quick connection to an appropriate PSAP & communication assistant (sign language, speech to speech, etc) at same time. In a same manner as ANI/ALI, their communication preference, language preference, medical information, and frequent physical addresses will appear on telecommunicator screen immediately. Also telecommunicators will be able to see the caller profile and to provide quick, effective and appropriate services to callers who may not be able to communicate their needs. See diagram in Appendix E. The challenges for individuals who are not registered with 9-1-1 are time delay in finding out communication preference, getting communication assistant and limited access to callers’ information. See diagram in Appendix D.

While information about callers is critical to telecommunicators whose primary responsibility is to provide appropriate assistance in an efficient way, recommendations on what type of primary and critical information should be considered for the database about the caller that would assist telecommunicators in providing effective services.

**Profile or Registry Recommendations:**

There are different ways for telecommunicators to access to caller’s information:

- form filled out by the caller, family member, social worker, and/or others

- vCard or medical records forwarded by the caller

- link to other databases such as medical records, vehicle, sensors, etc

Primary specific information on caller to be included in database should be:

- Language

- Communication Mode – for example, can’t hear but can speak

- Disability

- Frequent address(es)

- Medical Alert – medications – known allergies

- Link to other databases

- Others

Database includes info on: (recommended fields to be added to caller profile form)

1) Disability

2) Language Preference

3) Communication Modes (AAC, text, video, etc)

**Ongoing work related to user profile and accessible communication**

There are some activities in standards groups related to use of profiles for deciding on invocation of assisting services in calls. It is recommended to check the status of these actions and use as much of them as feasible when EVSCLAS service are implemented.

1.      3GPP work on modality requirements and preferences
3GPP standardizing wireless communication, has during 2012 initiated work on defining user profiles for indicating and negotiation of language and modality requirements and preferences. The reason is to be able to detect need for invocation of assisting services such as EVSCLAS services or everyday relay services in calls.

The work has resulted in changes in the service specification 3GPP TS 22.101, and now (autumn 2012) goes on to lower technical levels. The work was started with the approach to make emergency service user profiles, but was changed to be of general value.

**2.      ETSI work on Total Conversation Access to Emergency Services.**The standardization body ETSI has just completed work and published a technical report on the topic of Total Conversation Access to Emergency Services. The document describes many aspects of emergency calls with video, audio and real-time text. Profile usage for invocation of services is included. The report is numbered ETSI TR 104 170. It describes the needs and recommended functions in general terms as well as specifically for the Native SIP and the IMS Multimedia Telephony technologies.

The work now (December 2012) continues with a Technical Specification on the same topic, called ETSI TS 101 470 Total Conversation Access to Emergency Services, with similar topics, but more strict implementable style.

**3.      SIPFORUM work on specifications for relay services**SIPFORUM has just ( December 2012) started work on creating specification for relay services with the purpose to harmonize relay services and enable interoperability between relay services. The focus is on video relay services, but other services will also be mentioned. Profile usage and emergency calling are both within scope for this work, planned to be ready during 2013.

**XI. Consumer Education**

The evolution to NG911 is likely to take some time, and will produce a changing patchwork of available technologies as local and state migration is completed nationwide. As transition occurs, it is important to educate the public on new forms of available communication to 911 and where they are available for use.

Even today, consumers are not aware of options being offered to reach 911 such as alternative communication modes and relay services. To the extent possible, consumers should be aware of the best way to help themselves in an emergency, optimal modalities to meet their individual communication needs, and the best questions to ask PSAPs to make sure the appropriate communication modes are available where and when they are needed.

The need for public education has been stated by previous FCC advisory groups, including the Communications Security, Reliability and Interoperability Council (CSRIC), Working Group 4B:

“Effective public education and awareness programs about NG911 and the appropriate use of NG911 must be developed. Educating the public about NG911 should be done in two phases, with two distinct results in mind. First, the public should be educated about the benefits of NG911 to create a groundswell of support for its implementation. An informed and engaged public will act as an extremely powerful and influential lobbying group with decision makers who may be under-informed about the creation of NG911. Later, when transition is nearing completion, the public must also be educated about

NG911’s expanded capabilities for receiving information and about how they can best use these new options for contacting emergency services, as well as the limitations of the new system.”

It is essential that NG911 public education include specific components to address the needs of people with disabilities. Every community will tailor its consumer education to meet its particular needs, but there are a number of topics that should be considered, such as:

• The use of caller profile registration,

• How the 911 call is processed when registered or not registered,

• Choosing either relay services or the PSAP who will connect callers with sign language interpreter or communication assistant,

• Pros and cons of relay services and EVSLICAS, and

• Options for communication access while calling 911.

It will be a challenge to devise a plan that includes information on HOW to reach 911 as well as WHERE specific communication modalities are available to individual PSAPs. It will also be a challenge to update this information as the migration to NG911 continues. But state and local 911 Authorities are strongly encouraged to work with individuals, advocates and organizations familiar with the emergency communication needs of people with disabilities to identify their needs – from their perspective. Melding these needs with the particular needs of PSAP call takers will provide the framework for a public education program that enables PSAP call takers the ability to help callers in truly effective ways.

There may be a variety of options for how and where NG911 consumer education could be conducted. While in-person or video education may be preferable, other methods may be useful, such as Webcast demonstration (i.e., YouTube, etc.), public service announcements with open captions, and ASL interpreter and descriptive video services. Public education could be conducted in a number of venues, including Deaf and Hard of Hearing Commission meetings, Deaf/hard of hearing/deaf-blind/late deafened clubs/organizations meetings, booths at events, agencies serving specific populations, and informational presentations.

The timing of efforts should consider not only conducting consumer education before a new emergency communication option is available, but ongoing education after implementation of new technologies – perhaps on an annual basis. The credibility of the information is crucial, so presenters should be selected carefully, and it is recommended that the message be delivered by both PSAPs and community leaders; making sure that all appropriate accommodations are available (interpreters, caption). A collaborative approach will not only ensure appropriate expertise, but may also leverage resources and facilitate the process of reaching the greatest number of people who need the information.

The options for public education contained in this document are not meant to be an exhaustive or detailed list, but are intended to raise general issues for providing information about the NG911 system to the public that is truly useful for both consumers and PSAP call takers, and effective in making both callers and call takers ready for communicating in an emergency. Consumer education should also include explaining criminal charges for improper use or abuse of 9-1-1 calls.

**FUNDING**

The Media Communication Line Services( call center is unique concept because it changes the way 9-1-1 calls are being handled today and focuses on a system that is more responsive to the unique needs of people with disabilities. This proposed system includes an integrated technical interface, intensive trainings and new standards.

It is recommended that each call center be national recognized and certified and funded through the Universal Service Fund. It is recommended that FCC, DOT and/or DOJ work together on this funding.

The services to be reimbursed are:

 Minutes for handling 9-1-1 calls (time the call hits the MCLS switch to time call is disconnected)

 What else should be included in this? Start up fee? Consumer education? (consumer education and training owners/founders – like train the trainer of the SMCLS

**CONCLUSION**

Live video and text communication is becoming popular for communication worldwide and will be commonly used among all people.

Video technologies (stand alone, built-in webcam via computer, tablets & smart phones) are expanding as well as applications which individuals use for video communication. Products and applications from video relay service will not be the only one used for calling 9-1-1. Also video conferencing is expanding. It is essential that individuals have direct access to 9-1-1 via video using any applications and devices.

Text communication via IP and various methodologies for cellular phones and land line communications are being used more and more every day. TTYs continue to be a viable method of communication for people with various disabilities. It is also essential that individuals have direct access to 9-1-1 via text methods using any applications and devices.

Like any non-speaking hearing callers, people with disabilities will be able to call 9-1-1 directly and have telecommunicators to connect the caller with sign language interpreter or communication assistant. It is recommended that Media Communication Line Services to be established.

The other benefit of having direct video call to 9-1-1 is to have telecommunicator to provide visual information of caller and the surroundings snapshot to police officer, medical technician or firefighter. This will help to minimize frustration and problems for both callers and first responders as well.

APPENDIX A: **CURRENT - Hearing person who speaks foreign language other than English calls 9-1-1**

When a hearing person calls, the telecommunicator recognizes that s/he speaks another language. The telecommunicator will connect to a language services agency to provide translation services. This becomes three-way conferencing call. The PSAP has contract with the language services agency.

**Caller**

**PSAP**

**Language Services**

APPENDIX B: **Current Video Relay Service (VRS) – Calling 9-1-1**

**Routing Services**

**PSAP**

**Video Interpreter**

**Caller**

* A person calls VRS first and has the interpreter to call 9-1-1.
* Many VRS providers have contract with vendors that provide routing services to appropriate PSAPs.
* Video Interpreters call vendors first and give address to live person prior to connecting to PSAPs.
* Many calls go through non-emergency, emergency or administration line rather than via 9-1-1 line. Telecommunicators have priority to respond to calls coming through 9-1-1 lines.
* The video interpreter relays communication between telecommunicator and caller.

APPENDIX C: **NG9-1-1 - A person calls 9-1-1 using video (future)**

When a person calls 9-1-1 via video, the telecommunicator recognizes that the caller needs sign language interpreter or revoicer and then connects to Media Communication Line services (same concept as language services). The screen will show multi-video conferencing. There will be different types of communication modalities involved depending on the need of the callers. Examples are:

* Deaf-Blind (DB) – interpreter will voice what DB signs and then telecommunicator responds by typing to DB who will read LP or Braille
* Speech Disabled (SD) – interpreter will revoice what the SD says and then telecommunicator will talk directly to SD
* Late Deafened (LD) or others who are learning ASL – LD will voice to telecommunicator and have interpreter to sign along with captions

PSAP will record multi-way conversations.

The purpose of our work group is to develop a list of recommendations on what we would like to see the assistance line service to be established.

**Caller**

**PSAP**

**Media Communication**

**Line Service**

APPENDIX D: **NG9-1-1 - A person calls 9-1-1 using video (future) [no caller profile]**

When a person calls 9-1-1 via video, the telecommunicator recognizes that the caller needs sign language interpreter or revoicer and then connects to Media Communication Line Services (same concept as language services). The screen will show multi-video conferencing. There will be different types of communication modalities involved depending on the need of the callers. Examples are:

* Deaf-Blind (DB) – interpreter will voice what DB signs and then telecommunicator responds by typing to DB who will read LP or Braille
* Speech Disabled (SD) – interpreter will revoice what the SD says and then telecommunicator will talk directly to SD
* Late Deafened (LD) or others who are learning ASL – LD will voice to telecommunicator and have interpreter to sign along with captions

PSAP will record multi-way conversations.

**Caller**

**PSAP**

**Media Communication Line Service**

APPENDIX E: **NG9-1-1 - A person calls 9-1-1 using video (future) [caller profile]**

When a person calls 9-1-1 via video, the call will go through the caller profile database which will automatically notice that the caller needs a specific communication mode and then will connect to both PSAP and Media Communication Line Service OR Video Relay Service at the same time. The telecommunicator will read the caller profile at her/his station stating the type of communication mode the caller prefers prior to processing the call. All 3 will have multi-video conferencing. There will be different types of communication modalities involved depending on the need of the callers. Examples are shown in Diagram 3.

PSAP will also record multi-way conversations.

**Caller**

**PSAP**

**Media Communication LIne Service**

**OR**

**Video Relay Service**