

NENA/APCO Minimum Training and Operational Standards for TTY/TDD Communications in Public Safety Answering Points

Abstract: This standard addresses the minimum training and operational requirements, in general, necessary to foster levels of consistency for all personnel in an emergency communications environment assigned to answering TTY/TDD calls for service specifically in the Public Safety environment. This standard responds to the valid needs of the rapidly expanding and ever-changing industry, providing competent operational standards while defining training in certain knowledge, skills, and abilities, and recognizing the need to supplement basic competencies with agency-specific information and existing equipment-use parameters.



NENA/APCO Minimum Training and Operational Standards for TTY/TDD Communications in Public Safety Answering Points

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1 Executive Overview

This national standard addresses the critical need for consistent and effective emergency services for individuals who are Deaf, DeafBlind, Hard of Hearing, or have speech disabilities or other special needs. It establishes the minimum training and operational requirements for Telecommunicators in Public Safety Answering Points (PSAPs), procedures for the operation of the equipment and call handling processes used. The background of this issue stems from the Americans with Disabilities Act (ADA) [3] requirements and the evolving landscape of emergency communications technology.

The standard directly affects PSAPs, Telecommunicators, and the communities they serve. It provides a comprehensive approach to maintaining high-quality service by addressing the following topics: Agency responsibilities, organizational integrity measures, general knowledge and skills requirements, equipment and technology familiarization, performance expectations, and core competencies of Telecommunicators.

As the industry continues to advance, the integration of new technologies such as Real-Time Text (RTT) is transforming emergency communication capabilities. RTT provides a more dynamic and immediate method of communication compared to traditional Teletypewriter/Telecommunications Device for the Deaf (TTY/TDD) systems, allowing text to be transmitted instantly as it is typed, without the need for turn-taking. While this standard does not include recommendations on this technology, PSAPs and Telecommunicators need to be aware of its development.

Readers of this document should be aware that implementing this standard is crucial to ensuring equal access to emergency services for all individuals, regardless of their communication needs. Additionally, as technology evolves, PSAPs MUST remain vigilant in updating its training, equipment, and policies to meet the changing landscape of emergency communications and maintain compliance with ADA requirements. An example policy has been provided to assist in [Appendix C: Example TTY/TDD Communications Policy](#).

In conclusion, this document is a crucial step toward achieving uniformity in TTY/TDD training and operational standards across all PSAPs. It reflects a commitment to upholding the principles of equal access and non-discrimination as outlined in the ADA. Implementing these standards will require collaboration among various public safety entities and the deaf community and ongoing oversight to ensure that all requirements are met, enhancing the quality and delivery of 9-1-1 services.

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2 Document Conventions

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2.1 Document Terminology

This section defines keywords, as they should be interpreted in NENA documents. The form of emphasis (UPPER CASE) SHALL be consistent and exclusive throughout the document. Any of these words used in lower case and not emphasized do not have special significance beyond normal usage.

1. **MUST, SHALL, REQUIRED:** These terms mean that the definition is a normative (absolute) requirement of the specification.
2. **MUST NOT:** This phrase, or the phrase "SHALL NOT", means that the definition is an absolute prohibition of the specification.
3. **SHOULD:** This word, or the adjective "RECOMMENDED", means that there may exist valid reasons in particular circumstances to ignore a particular item, but the full implications must be understood and carefully weighed before choosing a different course.
4. **SHOULD NOT:** This phrase, or the phrase "NOT RECOMMENDED", means that there may exist valid reasons in particular circumstances when the particular behavior is acceptable or even useful, but the full implications should be understood and the case carefully weighed before implementing any behavior described with this label.
5. **MAY:** This word, or the adjective "OPTIONAL", means that an item is truly optional. One vendor may choose to include the item because a particular marketplace requires it or because the vendor feels that it enhances the product, while another vendor may omit the same item. An implementation which does not include a particular option "must" be prepared to interoperate with another implementation which does include the option, though perhaps with reduced functionality. In the same vein an implementation which does include a particular option "must" be prepared to interoperate with another implementation which does not include the option (except, of course, for the feature the option provides.)

These definitions are based on IETF RFC 2119 [2].

Public Safety Answering Point (PSAP) and Emergency Communications Center (ECC) terms are used in this document. While these terms are used interchangeably, there are unique characteristics that require specific terms to be used in specific situations.

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2.3 Reason for Issue/Reissue

NENA reserves the right to modify this document. Upon revision, the reason(s) will be provided in the table below.

Document Number	Approval Date	Reason For Issue/Reissue
NENA 52-001, NENA TTY Training Operational Standard	February 1, 2005	Initial Document
NENA 52-003, NENA TTY Call Taker Proficiency and Quality Assurance Operational Standard/Model Recommendation	December 6, 2005	Initial Document
APCO/NENA ANS 3.105.1-2015	February 24, 2015	Initial ANSI Document
NENA/APCO-STA-051.2-2026	July 23, 2026	Revision/New Document (ANSI)

3 Introduction

3.1 Scope

This standard identifies the minimum training and operational requirements for Telecommunicators specific to providing direct and equal access to public safety services to people who use a TTY/TDD to communicate, in accordance with the Americans with Disabilities Act and Department of Justice (DOJ) requirements. This document defines the knowledge, skills, competencies, and minimum training and operational requirements for individuals who receive emergency telephone calls from the public as well as the Agency's responsibilities for providing training, written directives, and testing in this critical function.

3.2 Purpose

In an effort to provide standardized training and operational requirements for PSAPs in the area of TTY/TDD call handling, the development of this document includes standards developed by the National Emergency Number Association (NENA) and the Association of Public-Safety Communications Officials (APCO) International. The Minimum Operational and Training Standards for TTY/TDD Communications in Public Safety Answering Points Work Group developed this document on the premise that training and standard operating procedures SHOULD be standardized across public safety organizations to ensure consistent operation of the equipment used and call handling procedures and compliance with the Americans with Disabilities Act (ADA), Title II [4] requirements for telephone emergency services.

It is important for PSAPs or agencies that provide emergency services to be cognizant of other relevant standards, mandates, and legislation.

4 Agency Responsibilities

4.1 Scope

While the majority of this document addresses the training and operational standards associated with a Telecommunicator's effective processing of TTY and RTT calls, this section outlines the Agency's responsibilities for providing training to both new and veteran Telecommunicators in accordance with this standard.

4.2 General Agency Responsibilities

The Agency SHALL establish no less than these minimum training requirements while complying with all local, state, federal, and tribal laws.

The Agency SHALL define the baseline qualifications in addition to the requisite cognitive, affective, and psychomotor skills needed to achieve compliance with this standard.

The Agency SHALL provide Telecommunicators with written directives related to effectively processing TTY and RTT calls.

The Agency SHALL not rely solely on an outside relay service or 3rd party service to receive incoming TTY/TDD calls.

The Agency SHALL provide TTY/TDD users equal access to emergency services, ensuring they are as effective as those provided to persons making voice calls. Equal access is gauged by response time, response quality, hours of operation, and other features offered, which include but are not limited to: Automatic Number Identification (ANI), Automatic Location Identification (ALI), and call distribution.

The PSAP SHALL take measures during a power outage to ensure that TTY/TDD equipment remains fully operational and functional throughout the power failure.

PSAPs SHALL establish procedures for transferring TTY/TDD callers and related ANI/ALI information between primary to secondary PSAPs. A hosted CPE should ensure the capability of receiving calls from TTY/TDDs and present them to the remote PSAP.

If there is an interface between the CPE, TTY/TDD, and the PSAP's CAD system, transcripts of the call SHOULD also be recorded in the CAD incident.

The PSAP SHOULD develop a Standard Operating Procedure (SOP) that specifically identifies what pre-canned messages are, outlines how to use the messages during call handling, and SHOULD be immediately available to all positions with TTY/TDD capabilities.

The PSAP SHALL have procedures established for reporting and resolving TTY/TDD equipment malfunctions. The backup device should be used in the event a TTY/TDD machine malfunctions.

The PSAP SHALL be equipped with one TTY/TDD per position, plus a backup device in case of failure. Each Telecommunicator SHOULD be trained on both primary and backup equipment. Any equipment malfunctions must be brought to the attention of a supervisor.

4.2.1 Training

The Agency SHALL provide the Telecommunicator with comprehensive training which SHALL include information about the requirements of the Americans with Disabilities Act (ADA) [5] and Section 504 of the Rehabilitation Act [6] for telephone emergency service providers.

The Agency SHALL provide the Telecommunicator with appropriate cognitive and performance-based learning activities and performance evaluations as a part of the comprehensive training described in this standard to ensure students understand and can apply the information addressed throughout this standard.

The Agency SHALL provide the Telecommunicator with information about communication issues regarding individuals who are Deaf, DeafBlind, Hard of Hearing, or have speech disabilities, including information about American Sign Language (ASL).

The Agency SHALL provide the Telecommunicator with practical instruction on identifying and processing TTY/TDD and RTT calls, including the following:

- the importance of recognizing silent or open line TTY/TDD and RTT calls
- using proper syntax, abbreviations, and protocol when responding to TTY/TDD and RTT

The Agency SHALL provide the Telecommunicator with hands-on experience in TTY/TDD and RTT, either in a classroom setting or during shifts, and SHALL document and evaluate that training.

The Agency SHALL make comprehensive initial TTY and RTT training mandatory for all personnel who may have contact with individuals from the public who are Deaf, DeafBlind, Hard of Hearing, or have speech disabilities.

The Agency SHALL utilize a variety of ADA, TTY, and RTT-related topics for training, including but not limited to:

- abbreviations and etiquette
- crimes against people with disabilities
- disability awareness (a review of physical, visual, and communications-related disabilities, Alzheimer's awareness, and aphasia and other stroke-related conditions)
- disasters and people with disabilities
- emerging technologies and services
- English vs. ASL gloss
- Handling Voice Carry Over (VCO) and Hearing Carry Over (HCO) calls, as well as Speech to Speech (STS)
- legal updates
- Next Generation 9-1-1 and TTY
- procedures for Telecommunications Relay Service (TRS) calls
- procedures for Real-Time Text (RTT)
- technology and vendor-specific TTY features
- TTY/TDD call recognition and processing
- TTY/TDD protocol

- TTY call processing written directives

The Agency MAY utilize a variety of ADA and TTY-related interactive resources to accomplish training requirements, including but not limited to, state and local organizations/agencies for the Deaf, DeafBlind, Hard of Hearing, or those who have speech disabilities.

The Agency SHALL provide for a comprehensive TTY proficiency testing program that includes, but is not limited to, the following:

- The Agency SHALL evaluate the trainee for proficiency in recognizing and handling the following types of calls, in accordance with the Agency's written directives:
 - silent calls
 - open line calls
 - long, steady high-pitch tones (ASCII handshake when turning on the TTY/TDD equipment)
 - short beeping tones
 - Baudot tones,
 - voice announcer
 - TTY Detector
- The Agency SHALL evaluate the trainee on processing the following TTY/TDD call types:
 - Hearing Carry Over (HCO)
 - Voice Carry Over (VCO)
 - Relay Service calls
 - TTY/TDD-to-TTY/TDD
 - Other (e.g., Emerging Technologies)
- The Agency SHALL evaluate the trainee on the use of effective communication with callers using a range of English skills to American Sign Language gloss.
- The Agency SHALL evaluate the trainee on the use of TTY/TDD protocol, such as abbreviations, etiquette, and language.
- The Agency SHALL evaluate the trainee on TTY/TDD call interrogation standard operating procedures (SOPs) for gathering pertinent call-specific information.
- The Agency SHALL evaluate the trainee's ability to perform TTY/TDD troubleshooting and reporting procedures.
- The Agency SHALL evaluate the trainee on TTY/TDD call documentation.
- The Agency SHALL evaluate the trainee on the initiation of a public safety response based on the information gathered during the TTY/TDD call.
- The Agency SHALL evaluate the trainee on TTY/TDD call transfer procedures using the ECC's primary and backup TTY equipment.

- The Agency SHALL evaluate the trainee on the initiation of TTY/TDD calls, for call-back purposes, using the ECC's primary and backup TTY equipment.

The Agency SHALL establish a record-keeping system to document TTY-related training, written directives, and evaluation methods.

The Agency SHALL maintain detailed records for each individual Telecommunicator's initial and in-service TTY training, to include but not be limited to:

- certificate of completion or other proof of attendance
- number of training hours/time and date of training
- performance evaluation records
- title of any training courses/activities
- trainee basic demographic information
- written test scores, if applicable

The Agency SHALL maintain training course files on each training event, to include but not be limited to:

- course schedule/outline
- lesson plans, teaching guides, or any detailed information on topics covered
- list of attendees/course roster
- handouts, scenarios, activities, skills sheets, etc.
- name and contact information for course instructors
- title of course, seminar, or training activity
- total number of hours of training

The Agency SHALL provide the Telecommunicator with information on how and to whom they may address training issues and concerns.

The Agency SHALL provide the Telecommunicator with training and continuing education and opportunities that will allow the individual to maintain and/or enhance their knowledge, skills, and abilities as defined in Section 6 General Knowledge and Skills.

The Agency SHALL establish detailed and defined performance expectations, providing and ensuring a clear understanding of those expectations.

The Agency SHALL have an established mechanism by which the TTY and RTT-related job performance of the Telecommunicator is regularly reviewed and evaluated, at a minimum of every six months, based upon accepted quality assurance or improvement practices or standards.

The Agency SHALL ensure that Telecommunicators meet performance objectives and document such as part of the employee's annual performance evaluation.

The Agency SHALL ensure that Telecommunicators appropriately identify various types of TRS calls [7].

The Agency SHALL document and address unacceptable performance with additional training and coaching of the Telecommunicator in a timely manner.

The Agency SHALL ensure a fair and consistent application of a disciplinary process associated with TTY and RTT-related performance.

4.2.2 Refresher Training

The Agency SHALL make TTY/TDD and RTT refresher training available to any personnel who have contact with individuals from the public who are Deaf, DeafBlind, Hard of Hearing, or have speech disabilities. This training SHALL occur as often as training for voice calls but at a minimum, every six months. [8]

The Agency may accomplish and document refresher training using a variety of training methods, to include but not be limited to:

- classroom and/or skills lab training
- roll call/briefings
- seminars
- structured, independent studies
- TTY equipment testing evaluations
- written training materials

The Agency SHALL maintain updated written directives and SHALL provide the most current written directives, and any training necessary to address changes related to TTY/TDD and RTT call processing.

4.2.3 TTY/TDD Call Handling Process

4.2.3.1 Identification of Incoming TTY/TDD Calls

When initially answering the emergency calls, Telecommunicators SHALL follow the established phone answering procedures. However, if the Telecommunicator is unable to immediately (within two attempts by voice) establish voice communications, but determines the line is silent (or open), or the Telecommunicator hears beeping tones, they should immediately initiate a TTY/TDD call response.

Likewise, when a Telecommunicator hears a voice recording that advises with a message that this is a TTY/TDD call, the Telecommunicator SHALL immediately respond by initiating a TTY/TDD call response.

Automatic call detection equipment will only detect when TTY/TDD tones are present.

Accordingly, all silent calls should be challenged with a TTY/TDD.

4.2.3.2 Initiating a Response to an Incoming TTY/TDD Call

When initiating a response with a TTY/TDD which is directly connected to a phone line or integrated in computer-based system, the Telecommunicator SHOULD respond by turning on the TTY/TDD (direct connect) or opening the TTY/TDD screen and send a preprogrammed message or type the agency approved greeting [16]

The Telecommunicator SHOULD then handle the call in accordance with established procedures for that call type.

When initiating a response with at TTY/TDD that is not directly connected to a phone line, the Telecommunicator SHOULD respond by placing the handset in the acoustic coupler (rubber cups on top of TTY/TDD) making sure that the handset is positioned correctly (typically with the cord to the left of the equipment). It may be helpful to label the couplers "mouthpiece" and "earpiece" in advance to expedite this process.

The Telecommunicator SHOULD then turn the TTY/TDD power button on and send the preprogrammed greeting.

Once the TTY/TDD caller responds, the Telecommunicator SHOULD continue to follow the procedures for handling the call in accordance with established procedures for that call type.

4.2.3.3 Voice Carry Over

When a caller requests this format for their communications, the Telecommunicator must listen to the caller speak, but then use the TTY/TDD to respond. This method requires the Telecommunicator to switch from voice to TTY mode on a single call.

4.2.3.4 Hearing Carry Over

When a caller requests this format for their communications, the Telecommunicator must use the TTY/TDD to receive the caller's message but should speak to the caller instead of typing. This method requires the Telecommunicator to switch from TTY to voice mode on a single call.

4.2.3.5 Telecommunication Relay Service (TRS)

Calls received from a Telecommunications Relay Service (TRS) SHALL be processed as any other call. Telecommunicators SHOULD speak to the TRS Communications Assistant as if they were the caller, as the TRS Communications Assistant will type exactly what the telecommunicator says. PSAPs SHALL NOT require that callers use a TRS.

4.2.3.6 Disconnected Calls

If, during the course of receiving an emergency call, the call is disconnected, the Telecommunicator SHALL implement established call-back procedures.

5 Organizational Integrity

5.1 Scope

This section discusses issues related to an organization's values and beliefs. Topics include mission statements, organizational structures, and obligations of the Telecommunicator (e.g., scope of profession, authority, confidentiality, and liability).

5.2 Responsibilities

The Telecommunicator SHALL demonstrate an understanding of the Agency's mission, values, and goals as they relate to providing direct and equal access to people with disabilities.

The Telecommunicator SHALL be able to articulate the Agency's expectations of professional conduct related to recognizing, processing, and dispatching calls for people with disabilities.

The Telecommunicator SHALL demonstrate proper application of the Agency's written directives regarding providing services to individuals who are Deaf, DeafBlind, Hard of Hearing, or have speech disabilities or other special needs.

The Telecommunicator SHALL adhere to applicable local, state, tribal, or federal statutes and codes as appropriate.

The Telecommunicator SHALL demonstrate comprehension and application of diversity awareness and an active commitment to ensure equality, per Agency written directives.

6 General Knowledge and Skills

6.1 Scope

This section provides an overview of the general knowledge and skills that are common among high-performing incumbent Telecommunicators, specific to providing services to individuals who are Deaf, DeafBlind, Hard of Hearing, or have speech disabilities or other special needs.

6.2 General Knowledge for the Telecommunicator

General areas of knowledge have been identified for the Telecommunicator related to TTY/TDD and RTT. If the Agency chooses to adopt these standards, training SHALL be

provided to the Telecommunicator in the respective areas as deemed appropriate by the Agency. The Telecommunicator SHALL demonstrate comprehension in at least the following areas:

- ADA-specific requirements of ECC for direct and equal access
- Agency operations
- Agency written directives
- Agency training standards and performance requirements
- ASL syntax
- available resources & references (i.e., interpreters, equipment repair)
- applicable local, state, tribal, and/or federal standards and statutes, and any applicable certification requirements
- call volume and staffing procedures
- Deaf culture and diversity awareness
- employee complaint investigation and processing
- legal concepts and risk assessment
- record retention procedures
- relevant public safety and homeland security initiatives specific to responses to People with Disabilities (e.g., local, state, national; National Incident Management System (NIMS); Incident Command System (ICS); Tactical Interoperations Communications Plan (TICP)); National Response Framework
- Technological systems (i.e., current systems used within the ECC specific to primary and backup TTY equipment, RTT, emerging technologies, and new trends)
- User's Agency-defined protocols (Emergency Medical Dispatch (EMD), etc.)

6.3 General Skills of Telecommunicator

If the Agency chooses to adopt these standards, training related to TTY/TDD and RTT SHALL be provided to all Telecommunicators in the respective areas as deemed appropriate by the Agency. High-performing incumbent Telecommunicators have been identified as demonstrating the following skills:

- active listening skills
- analytical skills
- critical thinking skills
- decision-making skills
- multi-mode communications skills (e.g., alternating voice, text)
- multi-tasking skills
- operational skills
- problem solving skills
- reading comprehension skills

- stress management skills,
- Telecommunicator skills [\[9\]](#) [\[10\]](#)
- troubleshooting skills
- TTY equipment and/or TTY computer skills
- RTT equipment and/or skills
- typing skills
- written and verbal communication skills

7 Tools, Equipment, and Technology

7.1 Scope

This section addresses the need for all Telecommunicators to demonstrate proficiency in all appropriate tools, equipment, and technology they may be expected to operate within the public safety communications center and/or training facilities.

7.1.1 Responsibilities

The Telecommunicator SHALL demonstrate proficiency in using tools, equipment, and technology specified in NENA E9-1-1 PSAP Equipment Standards, NENA-STA-027 [\[11\]](#).

The Telecommunicator SHALL demonstrate the ability to receive, process, and initiate calls of an emergency and non-emergency nature utilizing the Agency's primary and backup TTY and RTT equipment, detection equipment, telephony equipment, records management system, and other related tools or equipment.

8 Professional Competence

8.1 Scope

This section identifies those components within Public Safety Communications that are critical for enhancing the professional competence of all Telecommunicators. While the Agency has some responsibility for supporting and facilitating the development of the Telecommunicators' professional competence, this section places primary accountability upon the Telecommunicator.

8.1.1 Responsibilities

The Telecommunicator SHALL complete training and maintain all certifications as required by national, state, local, and Authority Having Jurisdiction (AHJ) directives.

The Telecommunicator SHALL take responsibility for their professional career development by actively seeking opportunities to enhance their job knowledge and skills in providing direct and equal access to public safety services for individuals who

are Deaf, DeafBlind, Hard of Hearing, or have speech disabilities or other special needs.

The Telecommunicator SHALL comply with federal, state, and local government regulations and department policies related to TTY/TDD and RTT.

The Telecommunicator SHALL demonstrate the ability to meet and/or exceed the TTY and RTT-related performance standards set by the Agency.

The Telecommunicator SHALL demonstrate competency in the skills as detailed in [Section 6.3 General Skills of Telecommunicator](#).

The Telecommunicator SHALL actively seek feedback and review of their performance, including during the Agency's established quality assurance or quality improvement process.

The Telecommunicator SHALL demonstrate the ability to operate within all written directives and plans regarding operations established by and for the Agency.

- The Telecommunicator SHALL demonstrate a general working knowledge of Agency TTY and RTT-related operations, including, but not limited to, call taking and other related job duties.
- The Telecommunicator SHALL demonstrate the appropriate application of written directives and plans.
- The Telecommunicator is encouraged to provide recommendations or feedback for complying with written directives and plans when appropriate.

9 Core Competencies of the Telecommunicator

9.1 Scope

This section addresses the core competencies and minimum training requirements for the successful performance of the duties of a Telecommunicator in regard to providing public safety services to individuals who have a hearing or speech disability.

9.1.1 Responsibilities

The Telecommunicator SHALL demonstrate the ability to provide emergency telephone services to individuals who have a hearing or speech disability in compliance with all legal requirements, including but not limited to the following:

- The Telecommunicator SHALL demonstrate familiarity with any local, state, federal, and tribal regulations related to providing governmental services to people with disabilities, which include but are not limited to:
 - ADA Amendments Act (ADAAA) of 2008 [\[12\]](#)
 - Americans with Disabilities Act (ADA) of 1990, Title II [\[4\]](#)

- Rehabilitation Act of 1973, Section 504 [13]
- The Telecommunicator SHALL demonstrate the knowledge and competency of the direct and equal access requirements established by the Department of Justice (DOJ) in the following documents:
 - ADA: Access for 9-1-1 and Telephone Emergency Services [14]
 - ADA Toolkit, Chapter 4: 9-1-1 and Emergency Communications Services [8]
 - ADA Toolkit, Chapter 4 Addendum: Title II Checklist [15]
- The Telecommunicator SHALL demonstrate knowledge and awareness of liability issues and legal penalties associated with failing to provide direct and equal access.
- The Telecommunicator SHALL demonstrate an understanding of and comply with all departmental policies and procedures related to handling TTY/TDD and RTT calls.

The Telecommunicator SHALL demonstrate the ability to process emergency and non-emergency calls for service for individuals who have a hearing or speech disability.

- The Telecommunicator SHALL recognize that a disability may include, but not be limited to, the following:
 - deaf
 - deafblind
 - hard of hearing
 - late deafened
 - mild hearing loss
 - moderate hearing loss
 - profound hearing loss
 - severe loss
 - speech disability
- The Telecommunicator SHALL demonstrate the ability to communicate directly with callers via a TTY/TDD and RTT in English and American Sign Language (ASL) gloss.
- The Telecommunicator SHALL demonstrate the ability to communicate indirectly through a TRS with callers who have a disability but do not use TTY/TDD equipment to communicate.

The Telecommunicator SHALL demonstrate the ability to utilize the Agency's primary and backup TTY/TDD equipment to interact with citizens who use TTY/TDDs to communicate via the telephone and process calls for service.

The Telecommunicator SHALL demonstrate the ability to use stand-alone TTY/TDD equipment, acoustic couplers, and/or direct connect mode.

The Telecommunicator SHALL demonstrate the use of integrated TTY/TDD equipment, as applicable.

The Telecommunicator SHALL demonstrate TTY/TDD troubleshooting procedures.

The Telecommunicator SHALL demonstrate the comprehension and use of TTY/TDD detection equipment, as applicable.

The Telecommunicator SHALL demonstrate the knowledge of voice announcers and pre-programmed message functions of standalone and integrated TTY/TDD equipment, as applicable.

The Telecommunicator SHALL demonstrate the procedures for documenting and integrating the TTY/TDD call information into Computer Aided Dispatch and Records Management Systems, as applicable.

The Telecommunicator SHALL demonstrate the ability to conduct, participate in, and document TTY equipment test calls, including but not limited to the following:

- Intra-Center Testing
- Inter-Center Testing
- Volunteer TTY/TDD Caller Testing

The Telecommunicator SHALL demonstrate the ability to process calls originating from various types of consumer TTY/TDD equipment used for emergency call handling:

- portable/compact units
- public TTY/TDDs
- standalone
- text/SMS
- RTT
- web-based TTY

The Telecommunicator SHALL identify TTY/TDD call recognition:

- detection equipment
- long steady high-pitch tones (ASCII handshake when turning on the TTY/TDD equipment)
- open lines
- short beeping tones
- Baudot tones
- silent calls
- voice announcer

The Telecommunicator SHALL demonstrate the use of TTY/TDD protocols, such as abbreviations, language, and etiquette.

The Telecommunicator SHALL demonstrate recognition and use of abbreviations (see Appendix A) commonly used in TTY/TDD calls.

The Telecommunicator SHALL translate key phrases from English to ASL gloss.

The Telecommunicator SHALL translate key phrases from ASL gloss to English.

The Telecommunicator SHALL demonstrate knowledge of TTY/TDD call transfer procedures.

The Telecommunicator SHALL demonstrate knowledge of the procedures for initiating a TTY/TDD call in cases of call disconnection and/or the need to call back a reporting party.

The Telecommunicator SHALL demonstrate knowledge of the procedures for responding to Voice Carry Over (VCO) requests directly from callers.

The Telecommunicator SHALL demonstrate knowledge of the procedures for responding to Hearing Carry Over (HCO) requests directly from callers.

The Telecommunicator SHALL demonstrate knowledge of the procedures for handling various types of calls from TRS:

- Hearing Carry Over (HCO)
- Voice Carry Over (VCO)
- Internet Protocol (IP) relay
- Speech-to-Speech
- TTY-to-Voice
- RTT
- Video Relay Services (VRS)

The Telecommunicator SHALL demonstrate knowledge of the procedures for handling non-English TTY/TDD calls.

10 Impacts and Considerations

10.1 Operations Impacts Summary

Operational impacts may include the need for additional staffing during training periods. Additionally, as technology transitions from landlines/POTS (Plain Old Telephone Service) to digital, this shift may affect TTY usage within the Deaf community.

This national standard addresses a critical need for consistent and effective emergency services for individuals who are Deaf, DeafBlind, Hard of Hearing, or have speech disabilities or other special needs. It establishes the need for minimum training

requirements for Telecommunicators in PSAPs, procedures for the operation of the equipment, and call handling processes used.

As technology evolves, PSAPs MUST remain vigilant in updating their training and equipment to meet the changing landscape of emergency communications and maintain compliance with ADA requirements.

10.2 Technical Impacts Summary

Traditional TTY/TDD systems are well established within the impacted community, PSAPs, and the call handling equipment industry. However, as the industry continues to advance, the integration of new technologies such as RTT is transforming emergency communication capabilities. RTT provides a more dynamic and immediate method of communication compared to traditional TTY/TDD systems, allowing text to be transmitted instantly as it is typed, without the need for turn-taking. While this standard does not include recommendations on this technology, PSAPs and Telecommunicators need to be aware of its development and respond accordingly to changes within the needs of their local service community.

10.3 Security Impacts Summary

It is important to follow your agency and/or vendor cybersecurity policies and procedures for the use of TDD/TTY technology, the implementation of new technology (RTT), and any online training procedures.

10.4 Recommendation for Additional Development Work

No additional work was identified by the working group.

10.5 Anticipated Timeline

While TTY/TDD is fully developed, RTT is to be implemented as it becomes available and or required in the PSAP's local service community. Continuing education as required by the ADA be completed as required by the ADA, individual state standards, and recommended by NENA and APCO standards.

10.6 Cost Factors

PSAPs SHOULD remain aware of the costs required for equipment purchase, maintenance, upgrades, and personnel training.

10.7 Cost Recovery Considerations

PSAPs SHOULD be aware of and leverage the cost recovery options for the implementation and use of this technology within their individual state regulations.

10.8 Additional Impacts (non-cost related)

The information or requirements contained in this NENA document are expected to have 9-1-1 center operational impacts as RTT becomes fully developed and deployed, based on the analysis of the authoring group. At the date of publication of this document, the impacts are unknown.

11 Abbreviations, Terms, and Definitions

See the NENA Knowledge Base (NENAkB) [\[1\]](#) for a Glossary of terms and abbreviations used in NENA documents. Abbreviations and terms used in this document are listed below with their definitions.

Term or Abbreviation (Expansion)	Definition / Description
ADA (American with Disabilities Act)	is Federal Legislation passed into law on July 26, 1990, that prohibits discrimination on the basis of disabilities. This landmark civil rights law both identifies and prohibits discrimination on the basis of disability in employment, state and local government, public accommodations, commercial facilities, transportation, and telecommunications. This Act requires all Public Safety Answering Points (PSAPs) to provide direct and equal access to emergency telephone services for people with disabilities who use Teletypewriters (TTY/TDDs), which are also known as telecommunications devices for the deaf. This means that the personnel answering calls at the PSAP level must be able to directly receive TTY/TDD calls and must be able to engage in TTY/TDD conversation.
Agency	The hiring authority, also referred to as the Authority Having Jurisdiction (AHJ). The Agency or body that defines the roles, responsibilities, policies and procedures, and performance standards that direct the activity of the Public Safety Telecommunicator. In multi-discipline centers, the Agency governs the operation, providing call taking/dispatch and related services to customer agencies; in single-discipline centers, a single Agency may direct these services for one or more departments within a service area. Both have the duty to define training appropriateness, content, format, and continuing education requirements.

Term or Abbreviation (Expansion)	Definition / Description
ASCII tones (American Standard Code for Information Interchange tones)	A 7-bit character code where each individual bit represents a unique character. A person can also use a computer with a TTY modem and related software to communicate with someone who has a TTY or who has a computer with TTY software and a modem. Computers generally operate in ASCII, an electronic "language." A person who uses ASCII must use an ASCII/Baudot modem and related software to convert the ASCII code into Baudot code to communicate with another person who is using a Baudot-based system. Similarly, a person using a Baudot-based TTY must utilize conversion software to communicate with a person using an ASCII-based computer. Some TTYs can function in both Baudot and ASCII.
APCO (Association of Public Safety Communications Officials)	The world's oldest and largest not-for-profit professional organization dedicated to the enhancement of public safety communications.
ASL (American Sign Language)	A visual-spatial language based on hand shape, position, movement, and orientation of the hands in relation to each other and the body, accompanied by facial expressions that are equivalent to the tone of voice.
Baudot Code	is a five-bit encoding scheme developed for Telex transmission that represents text, numerals, punctuation, and control signals. It is the standard transmission signaling scheme used by TDD/TTY devices.
Baudot Tones	Audio tones (sounds), representing the text, numerals, punctuation and control signals of the Baudot Code, that are transmitted between TTY devices and are converted to text.
CA (Communications Assistant)	An employee of the Telecommunications Relay Service (TRS) provider who transliterates conversation from text to voice and from voice to text between two end users of TRS. The term CA supersedes the term "TDD operator."
Call Back	The capability to re-contact the calling party.

Term or Abbreviation (Expansion)	Definition / Description
Cognitive and Performance-Based Learning Activities	Training activities that stimulate learning. Cognitive learning occurs primarily through exposure to logically presented information. Performance-based learning occurs when trainees are given opportunities to experience simulated or actual activities that involve the skills related to the learning objective.
Deaf	Partial or complete hearing loss. A deaf person, in medical terms, may have severe to profound hearing loss. When referencing the Deaf community, this refers to people who use American Sign Language, SEE (Signing Exact English), and CASE (Conceptually Accurate Signed English) language as a primary means of communication.
Detection equipment	A device, commonly referred to as a TTY/TDD Detector, that connects directly to the telephone line and monitors the line for the sounds of incoming TTY (Baudot and ASCII code) tones. When the TDD Detector recognizes TTY tones on the phone line, it announces the incoming TTY call and automatically sends a TTY message to the caller to let them know the call has been answered.
Disability	The term "disability" means, with respect to an individual (A) a physical or mental impairment that substantially limits one or more major life activities of such individual; (B) a record of such an impairment; or (C) being regarded as having such an impairment.
DOJ (Department of Justice)	A branch of the Federal Government legislated to oversee compliance of Title II of the ADA.
ECC (Emergency Communications Center)	A facility designated to receive and process requests for emergency assistance, which may include 9-1-1 calls, determine the appropriate emergency response based on available resources, and coordinate the emergency response according to a specific operational policy. Note: The term "ECC" does not have the same meaning as "PSAP."
Hard of Hearing	Refers to those who have some hearing, are able to use it for communication purposes, and who are reasonably

Term or Abbreviation (Expansion)	Definition / Description
	comfortable doing so. A hard of hearing person, in audiological terms, may have a mild to moderate hearing loss.
HCO (Hearing Carry Over)	A method which utilizes both voice and text communications on the same call, allowing a person who has a speech disability to listen to the other party's conversation and respond by typing via a TTY or other means of text communications. There are multiple avenues for HCO, including TRS and RTT.
Integrated TTY	TTY functionality that has been integrated within a computer workstation. This may be found within the 9-1-1 telephony system or interfaced in a CHE (Call Handling Equipment) system.
Inter-Center Testing	A testing process by which call takers make test calls to other ECCs to test their proficiency.
Intra-Center Testing	A testing mechanism by which call takers make test calls from position to position within the Center, utilizing the internal telephony system.
IP (Internet Protocol)	The method by which data is sent from one computer to another on the Internet or other networks.
NENA (National Emergency Number Association)	NENA is referred to as "The 9-1-1 Association", NENA (National Emergency Number Association) is fully dedicated to the continued improvement and modernization of the 9-1-1 emergency communication system. NENA's approach includes research, standards development, training, education, certification, outreach, and advocacy through communication with stakeholders. As an ANSI-accredited Standards Developer, NENA works with 9-1-1 professionals, public policy leaders, emergency services and telecommunications industry partners, like-minded public safety associations, and more. Current NENA activities center on awareness, documentation, and implementation for Next Generation 9-1-1 (NG9-1-1) and international three-digit emergency communication systems. NENA's worldwide members join with the emergency response community in

Term or Abbreviation (Expansion)	Definition / Description
	striving to protect human life, preserve property, and maintain the security of all communities.
Open line	Call in which no one is speaking or typing but the call taker can hear the presence of any background sounds.
POTS (Plain Old Telephone Service)	The Voice-grade telephone service employing analog signal transmission over twisted pair copper wire.
PSAP (Public Safety Answering Point)	A physical or virtual entity where 9-1-1 calls are delivered by the 9-1-1 Service Provider.
Rehabilitation Act of 1973, Section 504	A federal law that protects qualified individuals from discrimination based on their disability. The nondiscrimination requirements of the law apply to employers and organizations that receive financial assistance from any Federal department or agency.
RTT (Real-Time Text)	A text transmission that is character at a time, as in TTY. Technology that allows consumers to send and receive Internet Engineering Task Force (IETF) RFC 4103 text characters, as they are typed, as well as audio simultaneously.
Silent Call	A call placed to 9-1-1 that has successfully passed through the 9-1-1 network and has been answered by a 9-1-1 telecommunicator. Aside from the 9-1-1 telecommunicator, no voice communication is heard from the caller's end of the emergency call. The presence of ambient (background) clutter, (e.g., music, crying, yelling) is not detectable. The telecommunicator is unable to discern that there is someone at the other end of the call. Related Document: NENA Standard for 9-1-1 Call Processing, NENA-STA-020.1-2020
Speech Disability	Includes communications disorders, such as stuttering, impaired articulation, language impairment, or a voice impairment, that adversely affects a person's ability to articulate speech clearly.
STS (Speech-to-Speech)	A form of Relay Service that provides Communications Assistants (CAs) for people with speech disabilities who have

Term or Abbreviation (Expansion)	Definition / Description
	difficulty being understood on the phone. STS CAs are trained individuals familiar with many different speech patterns and language recognition skills. https://www.fcc.gov/consumers/guides/speech-speech-relay-service
Syntax	The study of rules that govern the ways words combine to form phrases, sentences, and clauses. ASL syntax follows subject – verb - object
TRS (Telecommunications Relay Service)	Allow persons who are deaf, hard of hearing, deafblind, or have speech disabilities to communicate by telephone in a manner that is functionally equivalent to telephone services used by persons without such disabilities.
TTY/TDD (Teletypewriter/Telecommunications Device for the Deaf)	A device capable of information interchange between compatible units using a dial up or private-line telephone network and Voice over Internet Protocol (VoIP) connections as the transmission mediums. ASCII tones or Baudot codes are used by these units. (per EIA PN-1663).
VCO (Voice Carry Over)	A technology that utilizes both voice and text or video communications, allowing a person with a hearing loss to speak to the other party and read their responses simultaneously as typed or signed by the communications assistant via a text or video-capable device. There are multiple avenues for VCO, including TRS and RTT.
Voice announcer	A feature on some TTYs that uses a computerized voice message to announce to the called party that a TTY call is being received.
VoIP (Voice over Internet Protocol)	A technology that permits delivery of voice calls and other real-time multimedia sessions over IP networks.
VRS (Video Relay Service)	A telecommunications relay service that allows people with hearing or speech disabilities who use sign language to communicate with voice telephone users through video equipment. The video link allows the Communications Assistant to view and interpret the party's signed conversation and verbally relay the conversation back and forth with a voice caller.

12 References

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13 Appendices

13.1 Appendix A: TTY Quick Reference Card

TTY Quick Reference Card



Proper TDD Protocol

GA – go ahead

Q GA – question that you want answered immediately

GASK – indicates you have all necessary information and have no more questions

SKSK – officially ends a TTY call

Common Abbreviations

ANS answer	NBR number	U you	PH phone	CUD/CLD could	INFO information	MSG message
WUD would	BLDG building	R are	DR doctor	AMBO ambulance	THX thanks	OPR operator
ENUF enough	CLR clear	CUZ cause	UR your	HLD hold	IMPT important	CUL see you later
XXXXX error	MIN minute	NP no problem	DIFF different	ASAP as soon as possible	OIC oh, I see	MED medical or medicine
FONE telephone	PLS please	BSY busy	THOT thought	BRB be right back	HLP help	SLD should
HOSP hospital	TMW tomorrow	NXT next	RPT report	HOSPVAN ambulance	HSPTL hospital	

Sample Key Questions/Phrases

QUESTION/INFORMATION NEEDED	ENGLISH	AMERICAN SIGN LANGUAGE
ADDRESS	Where is your emergency Q GA What is your address Q GA	Live you where Q GA Where you now Q GA Address where need ambo Q GA
PHONE NUMBER	What is your phone number Q GA	Phone you number Q GA
EMERGENCY/PROBLEM/ COMPLAINT	What is your emergency Q GA Do you need police fire ambulance Q GA	Problem what Q GA Wrong what Q GA Need you police fire ambo Q GA
NAME	What is your name Q GA	Name you what Q GA
TIME OF INCIDENT	When did this happen Q GA	Problem when Q GA
WHO'S INVOLVED	Who is involved Q GA	Hurt who Q GA There who Q GA

QUESTION/INFORMATION NEEDED	ENGLISH	AMERICAN SIGN LANGUAGE
DESCRIPTIONS	What do they look like Q GA	Look man how Q GA
WEAPONS/INJURIES	Do they have guns, knives Q GA Is anyone hurt Q GA How many people are hurt Q GA Is your father conscious Q GA Is your father breathing ok Q GA How old is girl Q GA Is there any bleeding Q GA	Gun knife they Q GA Gun knife see you QQ Hurt who Q GA Hurt how many Q GA Father awake Q GA Father blow ok Q GA Age girl Q GA Blood any Q GA
ADDITIONAL	I dont understand GA Please repeat last message GA	I dont understand GA Message repeat GA

TTY Quick Reference Card



TTY Calls

Silent Calls – Query the line on all *silent calls* after two verbal attempts to communicate. Follow silent call procedures.

Beeping Tones – When answering the phone, *beeping tones* may be heard which indicates the caller may be using a TTY. Query the line using a TTY.

TTY Detectors – When answering a phone line, you may hear a recorded announcement that advises the you of an incoming TTY call which means you should query the line using a TTY.

Voice Announcer – When answering a phone line, you may hear a phrase such as "*Hearing im- paired caller, use TDD*" which means you should query the line using a TTY.

TTY Call Variations

Voice Carry Over (VCO) – You may receive a request from a caller for VCO. This means the caller has a voice and can speak. They prefer to speak to you through the telephone handset and then have the communications officer type to them.

VCO = caller speaks/reads & communications officer listens/types.

Hearing Carry Over (HCO) – You may receive a request from a caller for HCO. This means the caller can hear but cannot speak. They prefer to type their side of the conversation and listen to you speak through the telephone handset.

HCO = caller listens/types & communications officer speaks/reads.

Telecommunications Relay Service (TRS) – You may receive a call through the Georgia Relay Service. When you are dealing with a relay service operator, it is important that you speak in 1st person -- directly as if speaking to the caller. Remember to speak slowly since the relay operator will be typing everything that you say. Don't forget to use "go ahead" when you want the caller to respond.

13.2 Appendix B: TTY Performance Evaluation Instructor Guidelines

13.2.1 TTY Testing Evaluation Checklist

TTY Testing Evaluation Checklist		
Student Name and Title:	Date/Time:	Scenario #:
Evaluator Name:	Call Type: ☐ TTY ☐ HCO ☐ VCO ☐ Other	Format: ☐ ASL ☐ English
Time required to establish contact:	☐ Silent Call ☐ Beeping Tones	Initiated: ☐ Internal ☐ External
Identification Method: ☐ Silent ☐ Open Line ☐ Tones ☐ Voice Announcer ☐ Detector		
Rating Scale		
1 2 3 Below Standard Needs Improvement	4 Meets Minimum Acceptable Standard	5 Exceeds Minimum Standard
Evaluation Components	Rating	
Identification as a TTY Call & Initial Response		
Adherence to Call Type Procedures		
Recognition and Response in Proper Language Format Syntax (ASL/English)		
Use of Protocol, Abbreviations, Dialogue, & Etiquette (GA Q QQ GASK SKSK)		
Caller Interrogation (Pertinent Questions Asked)		
Initiated Proper Public Safety Response		
Performed Proper Troubleshooting & Reporting Procedures		
Documented TTY Call Information		
Performed TTY Call Transfer (if applicable)	☐ Yes ☐ No ☐ N/A	
Initiated TTY Call Back (if applicable)	☐ Yes ☐ No ☐ N/A	
Total Points (32/40)		
Evaluator Comments on Deficiencies/Problems		

Plan of Action

- ☐ **Demonstrated proficiency** – maintain training as schedule
- ☐ **Failed to demonstrate proficiency** - needs remedial training and further evaluation
- ☐ **Failed to demonstrate proficiency** - needs additional equipment practice and further evaluation

13.2.2 NENA-APCO TTY/TDD Recommended Testing & Evaluation Guidelines

Rating Criteria

Instructions: The following rating criteria are used to determine the scores assigned to the student's performance on the Evaluation Checklist on the previous page. The numbers to the left (1, 2, 3, 4, 5) are equal to point values to be used on the Evaluation Checklist. The narrative beside each number is meant to serve as a guide to the instructor in determining the appropriate score for each criteria based on the student's performance in a given scenario.

Identification as a TTY/TDD Call & Initial Response

1. Did not recognize as TTY/TDD call and disconnected without further investigation.
2. Did not recognize as TTY/TDD call immediately and was delayed in providing initial response (greeting).
3. Recognized as TTY/TDD call, slow to respond with greeting or typed incomplete greeting.
4. Recognized as TTY/TDD call after several (2-3) verbal attempts and responded with correct greeting.
5. Immediately recognized as possible TTY/TDD call after several (2-3) verbal attempts, responded with a greeting which included agency name and a question or directed instruction for the TTY/TDD caller (example: Duvall 911 type your address GA or Duvall 911 live you where Q GA).

Adherence to Call Type Procedures

1. Did not recognize call type properly and failed to follow appropriate procedures.
2. Did not recognize call type immediately and was delayed in employing proper procedures.
3. Recognized call type but was slow to respond using the proper procedures.
4. Recognized call type and responded with proper procedures.
5. Immediately recognized call type and implemented call procedures with no hesitation or errors.

Recognition and Response in Proper Language Format Syntax (ASL/English)

1. Did not identify or use the proper syntax for this call as established by the scenario.
2. Identified proper syntax but did not communicate using the appropriate format.
3. Identified the proper syntax but was delayed in response while converting to correct syntax or reverted to other syntax (more than two uncorrected mistakes).
4. Used proper syntax and format with little delay without reverting to the other syntax more than twice.
5. Used proper syntax and format with no delay and no uncorrected mistakes.

Use of Protocol, Abbreviations, Dialogue, & Etiquette (GA Q QQ GASK SKSK)

1. Did not use proper protocol or abbreviations; failed to use proper dialogue and etiquette.
2. Used some protocol but did not use it appropriately; failed to use proper dialogue and etiquette.
3. Used protocol on most occasions with more than two uncorrected mistakes; mostly used proper dialogue and etiquette.
4. Used proper protocol with less than two uncorrected mistakes; used proper dialogue and etiquette with few mistakes.
5. Used proper protocol, dialogue, and etiquette with no uncorrected mistakes.

Caller Interrogation (Pertinent Questions Asked)

1. Did not ask pertinent questions.
2. Did not ask pertinent questions in a timely manner or in order of importance.
3. Asked some pertinent questions but did not ask enough questions relative to call type.
4. Asked all pertinent questions necessary in order of importance.
5. Asked all pertinent questions necessary in order of importance and directed caller on actions to take or actions not to take while waiting on responding units. Reassured the caller that help was being sent.

Initiated Proper Public Safety Response

1. Did not initiate proper public safety response.
2. Did not immediately or accurately identify public safety need but initiate some form of public safety response.
3. Did not immediately identify public safety need; was delayed in initiating appropriate public safety response.
4. Recognized public safety need accurately; initiated dispatch of appropriate public safety response.

5. Immediately recognized accurate public safety need; initiated dispatch of public safety response without delay.

Performed Proper Troubleshooting & Reporting Procedures

1. Did not troubleshoot technical issues during call; failed to report technical issues.
2. Did not immediately troubleshoot technical issues during call; failed to report technical issues.
3. Did troubleshoot technical issues during call; failed to report.
4. Did troubleshoot technical issues during call; reported technical issues as required.
5. Immediately performed troubleshooting procedures; took measures to overcome technical issues; reported technical issues immediately.

Documented TTY/TDD Call Information

Yes/No Call taker documented all pertinent call information.

Performed TTY/TDD Call Transfer (if applicable)

Yes/No Call taker successfully performed TTY/TDD call transfer.

Initiated TTY/TDD Call Back (if applicable)

Yes/No Call taker successfully initiated TTY/TDD call back.

13.2.3 TTY Practice & Performance Scenario

On the following pages, you will find a series of practice and performance scenarios for use in administering performance examinations related to the TTY training described in this standard. These scenarios are meant to serve as a guide to assist instructors in developing their own scenarios with relevant information, addresses, and supplemental information conducive to your jurisdiction, procedures, and protocols. Instructor or roll players need to utilize ASL abbreviations, glossary, and syntax to the scenario. Additional training, exposure, and partnerships to ASL is recommended.

It is important for instructors to present scenarios which include a variety of:

- Call types (TTY-to-TTY, VCO, HCO, Relay Service, etc.)
- English and ASL messages
- Notification methods (silent, open line, tones, voice announcer, detectors)
- Announced (planned testing) and unannounced calls
- Relevant call handling procedures such as transfers and call-back.

13.2.3.1 TTY Practice Scenarios

Practice Scenario # 1		ASL Format
Scenario:	Your child has fallen and is not conscious. She fell off her bicycle.	
Initial Complaint:	HLP PLS NEED MEDICL VAN 5423 WILLOW WALK NEXT KENNEDY DR	
Translation:	Please send an ambulance to 5423 Willow Walk (near Kennedy Drive	
Problem:	MARY AWAKE NO RIDE BIKE THEN FALL TRUE HURT HURRY PLS	
Translation:	Your child has fallen and is not conscious. She fell off her bicycle.	

Practice Scenario # 2	English Format
Scenario:	You came home to find that your back door was standing open into the kitchen. You are in the kitchen but are scared to stay in the house.
Initial Complaint:	Please send police to 1137 Fall Court (near Loren Road).
Problem:	Possible burglary in progress, caller came home to find their backdoor broken. Open back door

Practice Scenario # 3		English Format
Scenario:	You are home alone and you saw someone look through the window. Now they are trying to get in through the back door.	
Initial Complaint:	I think someone is trying to break into my house.	
Problem:	The only description is white male with blue cap and white shirt. (Give only if asked)	

Practice Scenario # 4		ASL Format
Scenario:	You woke up to find your kitchen on fire. You are home with your two children (ages 3 and 6).	
Initial Complaint:	HELP PLS THERE IS FRE ON HOUSE	
Translation:	Help please, my house is on fire.	
Problem:	SONS ASLEEP WOKE UP SEE KITCHEN HAS FIRE	

Practice Scenario # 5		English Format
Scenario:	You were about to go to bed when your husband started experiencing shortness of breath and it has now gotten worse.	
Initial Complaint:	Help please, my husband is having trouble breathing. I think he needs an ambulance.	
Problem:	He has no history of similar medical problems.	

Practice Scenario # 6		ASL Format
Scenario:	Daughter is anemic and needs to go to the doctor, but caller does not have a vehicle. You are deaf, your daughter is not deaf.	
Initial Complaint:	DAUGHTER FALL SWING HEAD HIT BLOOD BLOOD NEED DOC	
Translation:	Help please, my daughter was playing on the swing set. She fell and is bleeding from the head. I think he/she needs an ambulance.	
Problem:	CAR NONE BUT DAUGHTER HAS LOW BLOOD	
Translation:	I do not have a car. My daughter is anemic.	

13.2.3.2 TTY Testing Scenarios

Test Scenario # 1		ASL Format
Initial Complaint:	AMBO NEED 958 SUNSET DRIVE AND NORMAL AVE ST HURRY	
Translation:	Please send an ambulance to 958 Sunset Drive (near Normal Avenue).	
Problem:	BRIAN (child age 8) DRINK BLEACH HOW MUCH NOT KNOW	
Translation:	Your child has swallowed bleach. You don't know how much.	
Additional Information		
Other:	You are the only other person there. You use sign language and cannot speak.	

Test Scenario # 2		English Format
Initial Complaint:	Please send police to 1001 Quince Drive (near Holden Road). You need help.	
Problem:	You came home to find that your son unconscious. There is a pill bottle next to him that is empty but you are not sure what or how much was in it. You cannot wake him up.	
Additional Information		
Other:	No one else is home at this time. You are hard of hearing but can read lips. You prefer written communications.	

Test Scenario # 3		ASL Format
Initial Complaint: Translation:	SEE MAN WINDOW OUTSIDE NOW DOOR KITCHEN HELP PLS SCARED I think someone is trying to break into my house.	
Problem: Translation:	NOW IN FRONT ROOM ONLY ME AND VERY SCARED CANT SEE AT KITCHEN DOOR You are home alone and you saw someone look through the kitchen window. Now they are trying to get in through the kitchen door. You have run to the living room to use the phone. You cannot see the kitchen door anymore and do not know if they have gotten in. You are deaf and cannot hear anything.	
Additional Information		

Test Scenario # 4		ASL Format
Initial Complaint:	HELP APARTMENT HAS FIRE DOOR HOT AND SMOKE STUCK APT C FLOOR 3	
Translation:	Help please, my apartment is on fire.	
Problem:	WAKE UP SEE SMOKE HERE SCARED FOR GET OUT HAVE BABY You woke up to the smell of smoke. You live on the third floor of the Windscape Apartments. It is very smoky and you are afraid to leave the apartment. You and your young daughter who is there with you are both deaf.	
Additional Information		

Test Scenario # 5		English Format	
Initial Complaint:	Help please, my wife is having trouble breathing. I think she needs an ambulance.		
Problem:	After dinner your wife began to feel weak so she was resting on the sofa. Now she is feeling worse and is having some difficulty in breathing. She has a previous history of heart problems and has a pacemaker.		
Additional Information			
Other:	You are speech impaired due to throat cancer. Your spouse is not deaf and not speech impaired but is unable to communicate very well due to the medical condition.		

Test Scenario # 6		ASL Format
Initial Complaint:	AMBO NEED FAST	
Translation:	You need an ambulance now!!	
Problem:	DAUGHTER CHOKE NO AIR FACE BLUE PLS SEND HELP	
Translation:	Your daughter was eating dinner and began to choke. She is still choking and is not able to cough. She is turning blue. Please send an ambulance.	
Additional Information		
Other:	You are deaf but your daughter is not deaf.	

13.3 Appendix C: Example TTY/TDD Communications Policy

This document is to be tailored/modified in accordance with your agency's standards and policies.

- I. Purpose Statement:** The purpose of this policy is to establish standardized procedures and responsibilities for effectively handling telecommunications devices for the deaf (TDD) and teletypewriter (TTY) communications within the Public Safety Answering Point (PSAP). This ensures compliance with the Americans with Disabilities Act (ADA), National Emergency Number Association (NENA) and Association of Public-Safety Communications Officials (APCO) standards and promotes equitable access to emergency services for individuals with hearing or speech disability.
- II. Policy:** It is the policy of this agency to ensure that all telecommunicators are trained and proficient in the use of TTY/TDD or similar devices. The PSAP shall maintain operational readiness of TTY/TDD equipment, conduct regular testing, and handle all TTY/TDD calls with the same priority and professionalism as voice communications. All PSAP staff must follow established procedures to provide prompt, clear, and effective assistance to TTY/TDD users.
- III. Telecommunicator Training:** All telecommunicators shall receive training in accordance with APCO/NENA Minimum Training Standard for TDD/TTY Use in the Public Safety Communications Center and Recommended Minimum Telecommunicator Training Guidelines.
- IV. Abbreviations and Definitions**
- **ADA:** Americans with Disabilities Act
 - **APCO:** Association of Public-Safety Communications Officials
 - **Baudot Code:** a five-bit encoding scheme developed for Telex transmission that represents text, numerals, punctuation and control signals. It is the standard transmission signaling scheme used by TDD/TTY devices.
 - **Baudot Tone:** audio tones (sounds), representing the text, numerals, punctuation and control signals of the Baudot Code, that are transmitted between TTY devices and are converted to text.
 - **NENA:** National Emergency Number Association
 - **PSAP:** Public Safety Answering Point - a physical or virtual entity where 9-1-1 calls are delivered by the 9-1-1 Service Provider.

- **TTY/TDD:** Teletypewriter/Telecommunications Device for the Deaf – a device or application used to send or receive character by character communication using Baudot signaling.
- **Silent Call:** A call placed to 9-1-1 that has successfully passed through the 9-1-1 network and has been answered by a 9-1-1 telecommunicator. Aside from the 9-1-1 telecommunicator, no voice communication is heard from the caller's end of the emergency call. The presence of ambient (background) clutter, (e.g., music, crying, yelling) is not detectable. The telecommunicator is unable to discern that there is someone at the other end of the call. (NENA Standard for 9-1-1 Call Processing, NENA-STA-020.1-2020)

V. Procedure

A. Equipment Readiness and Testing

1. All TTY/TDD equipment must be installed, maintained, and readily available at every telecommunicator workstation.
2. Functionality checks will be performed at a minimum once per shift and documented in accordance with agency procedures.
3. Technical issues with TTY/TDD equipment must be reported immediately to the appropriate supervisor or technical support personnel.
4. TTY/TDD equipment shall be tested in accordance with the NENA Managers Guide to the ADA Title II, and that testing shall be documented. Documentation shall include:
 - a. Name and Title of employee conducting the test call
 - b. Date & Time
 - c. Silent Call and/or Baudot (code) tones
 - d. Time required to establish contact
 - e. Initiated from internal (inside center) or external (from field) location
 - f. Format of Call (English vs. American Sign Language)
 - g. Copies of TTY/TDD printout shall be attached to documentation as evidence of the testing procedure.

B. Training Requirements

1. All telecommunicators shall receive initial and refresher training in the use of TTY/TDD equipment in accordance with NENA/APCO and ADA training standards.
2. Training shall include:
 - a. Equipment operation
 - b. Standard abbreviations used in TTY/TDD communications
 - c. Proper etiquette and procedures for engaging TTY/TDD users
 - d. Identification of TTY/TDD calls, including silent call procedures

C. Call Handling Procedures

1. Upon receipt of a silent call, telecommunicators shall initiate a TTY/TDD response within 15 seconds using the following protocol:
 - a. Send: "GA, This is [Agency Name] 9-1-1. Do you need police, fire, or medical? GA"
 - b. If no response is received within 30 seconds, repeat the message.
 - c. After two unsuccessful attempts, the telecommunicator shall dispatch law enforcement to the caller's location per silent call protocols, if callers location can be determined.
2. When handling confirmed TTY/TDD calls:
 - a. Use TTY/TDD abbreviations (e.g., GA – Go Ahead, SK – Stop Keying, Q – Question)
 - b. Be patient and allow the caller time to respond.
 - c. Maintain professionalism and do not disconnect prematurely.
 - d. Document the call in the CAD system in accordance with agency protocols.

D. Types of TTY/TDD Devices and 9-1-1 Call Reception: TTY/TDD devices vary in form and functionality, but all serve the primary purpose of enabling text-based communication over the telephone. The main types include:

1. **Standalone TTY Devices** – These are dedicated machines that feature a keyboard and display screen. They are connected directly to a landline telephone and used primarily by individuals with hearing or speech disabilities.

2. **Integrated TTY Software** – These applications are installed on computers or mobile devices and emulate the functionality of a TTY device, allowing text communication through digital platforms or Voice over Internet Protocol (VoIP) services.
3. **Relay Services** – This involves a third-party operator who translates voice to text and vice versa between a TTY user and emergency services. These services often initiate contact with the PSAP on behalf of the TTY user.

E. Calls from TTY/TDD devices may reach 9-1-1 in several ways:

1. Direct dial from a standalone TTY device.
2. Through a relay operator using the Telecommunications Relay Service (TRS).
3. Via mobile TTY-compatible applications.
4. **NOTE:** Telecommunicators must remain vigilant during silent calls or when receiving a call with tones or no verbal response. Immediate initiation of TTY protocol is necessary to determine the presence of a TTY user.

F. Documentation and Review

1. All TTY/TDD calls must be documented, including time of call, nature of emergency, and disposition.
2. Supervisors shall review TTY/TDD call handling during routine quality assurance reviews.

G. Compliance

1. This policy complies with:
 - a. ADA Title II requirements
 - b. NENA/APCO minimum training standards for TTY/TDD
2. Failure to comply with this policy may result in disciplinary action and mandatory retraining.

VI. Review and Update This policy shall be reviewed annually and updated as necessary to remain consistent with technological advances and national standards.

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