

Modernizing Minnesota's Telephone Equipment Distribution Program

**A report made in collaboration with
the Commission of Deaf, DeafBlind
and Hard of Hearing Minnesotans**

Deaf and Hard of Hearing Services Division

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Minnesota Statutes, Chapter 3.197, requires the disclosure of the cost to prepare this report. The estimated cost of preparing this report is \$15,000.

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I. Executive summary

In response to needs identified by the community through the Commission of Deaf, DeafBlind and Hard of Hearing Minnesotans, the 2015 legislature directed the Department of Human Services Deaf and Hard of Hearing Services Division to conduct two studies. As a follow-up to the studies, the 2017 legislature directed the Department of Human Services to prepare this report on modernization of the Telephone Equipment Distribution (TED) program.

The report addresses the multiple and compounded needs of the populations served by the TED program – those who are deaf, deafblind, hard of hearing, or who have speech or physical disabilities that affect their ability to effectively use telecommunications. This report also summarizes the TED program as well as its funding source, the Telecommunications Access Minnesota (TAM) fund.

Key issues that impact services to that population

- Flexibility required to adapt to the rapidly changing telecommunications platforms and telephone service options, as well as incompatibility of new and traditional devices.
- Geographic lack of access in all areas of Minnesota to broadband and other systems.
- Copper to fiber optic change impact.
- Potential adverse impacts to TAM funding.
- Hearing aid costs and availability.
- Not all TED-eligible Minnesotans can afford telephone services.

Report recommendations

Changes to statute

- Add language that allows TED to distribute up to date, functionally equivalent products and multi-functional telecommunications/safety signaling devices.
- Add language so that TED specialists are able to educate clients on their assistive technology options and assist them in applying for discounts on monthly telecommunications service costs.

Proposed language for these changes is found in [section VI](#).

Changes to internal operations

- Update and more effectively use TED's website and improve communications about the TED program.
- Develop an online application process and form.
- Create new methods and measures to assess program effectiveness.
- Continue to examine the possible use of vouchers as a mechanism for distributing some devices.

II. Legislation

This report is submitted to the Minnesota Legislature pursuant to [Minnesota Session Laws 2017, 1st Special Session, Chapter 6, Article 1, section 49](#).

DIRECTION TO COMMISSIONER; TELECOMMUNICATION EQUIPMENT PROGRAM.

The commissioner of human services shall work in consultation with the Commission of Deaf, Deafblind, and Hard-of-Hearing Minnesotans to provide recommendations by January 15, 2018, to the chairs and ranking minority members of the house of representatives and senate committees with jurisdiction over human services to modernize the telecommunication equipment program. The recommendations must address:

- (1) types of equipment and supports the program should provide to ensure people with communication difficulties have equitable access to telecommunications services;
- (2) additional services the program should provide, such as education about technology options that can improve a person's access to telecommunications services; and
- (3) how the current program's service delivery structure might be improved to better meet the needs of people with communication disabilities.

The commissioner shall also provide draft legislative language to accomplish the recommendations. Final recommendations, the final report, and draft legislative language must be approved by both the commissioner and the chair of the Commission of Deaf, Deafblind, and Hard-of-Hearing Minnesotans.

III. Introduction

In response to needs identified by the community through the Commission of Deaf, DeafBlind and Hard of Hearing Minnesotans (MNCDHH), the legislature directed the Department of Human Services Deaf and Hard of Hearing Services Division (DHHSD) to conduct two studies. The studiesⁱ, which were conducted in 2016, involved extensive interviews and meetings with community members and representatives of the persons who are deaf, deafblind, hard of hearing, or who have other communication disabilities across Minnesota, provided feedback and direction for the division as a whole. In addition, the studies highlighted issues related to the ability of Minnesotans who are deaf, deafblind, hard of hearing, or who have other communication disabilities in achieving functionally equivalent communications capabilities as other Minnesotans.

As a result of the findings of the studies and ongoing input from the community through MNCDHH and the DHHSD regional advisory committees, MNCDHH recommended to the legislature that the Telephone Equipment Distribution (TED) program consider recommendations for modernization. In response to the Legislature’s subsequent direction, DHHSD has worked with MNCDHH to examine what is currently offered in Minnesota and in other states, to explore possible approaches and finalize recommendations for modernization. In addition, DHHSD involved representatives from the Department of Commerce to review the funding source limitations and issues.

The Department of Human Services extends its appreciation to the representatives from MNCDHH and the Department of Commerce for their work on behalf of this project and to the project consultant, Judy Plante, for facilitating the project planning and work group meetings. Please see [Appendix Three: Project process and work group participants](#) for more information about the work group.

Discussion focused at two levels:

- The POPULATION level, where the needs and issues of Minnesotans who are deaf, deafblind, hard of hearing or have other communication disabilities such as a speech or physical disability; and
- The PROGRAM level, where the specific needs of clients of the DHHSD TED program were reviewed.

As context it is useful to know the basics about the TED program, as well as the Telecommunications Access Minnesota (TAM) fund that supports it.

TED Program

The TED program was launched as a program of the TACIP (Telecommunications Access for Communication Impaired Persons) Board, which was established in 1987 in response to requests from the Deaf community for functional equivalent access to the telephone system. At that time, the primary telephone access for persons who were deaf, deafblind or hard of hearing was through TTYs, which were high priced and out of affordable range. In 1992, TED began serving persons with multiple disabilities.

At the outset, the TED program primarily served Minnesotans who are deaf; now most participants are hard of hearing. There are a number of reasons for this shift in focus. First, when pagers and cell phones became widely available to the general public, the demand for TTYs used by people who are deaf decreased. Second, videoconferencing technology was developed and came into use as videophones for people who relied on visual communication such as sign language, again decreasing the demand for TTYs. Third, with the trend moving away from use of landline phones, the TED program demographic changed because the landlines that remain are more commonly used by people who are older and hard of hearing. And while the delivery methods for telecommunications service have changed over the years and the equipment needed to use telecommunications has evolved, the array of equipment TED can offer under current statute is limited, leaving some people unserved or underserved.

Since the program began in 1988, over 38,000 Minnesotans have been served. As of December 1, 2017, about 18,000 people still have active status in the program. That means they either currently have TED equipment or they have been approved for the program and in the process of receiving equipment.

The TED program has four eligibility requirements including an income limitation. To qualify, a person must be at or below the state's median income which is approximately 135% of the poverty rate for Minnesota. Currently, an estimated 44,600ⁱⁱ Minnesotans with hearing loss are potential clients of the TED program based on income eligibility. For the past eight years, the average TED client has been female, hard of hearing and age 80 – 85.

Examples of the equipment introduced throughout the history of the TED program can be found in [Appendix Four: Examples of TED Equipment, Past and Present](#).

TAM Fund

TAM (Telecommunications Access Minnesota) is funded by a monthly surcharge on consumer bills by all wired and post-paid wireless telephone access lines in the state, as well as a fee on each Minnesota retail transaction for prepaid wireless phone service. The current surcharge/fee is \$.05 per access line or retail transaction. By law, the surcharge/fee is allowed up to \$.20 per access line per month, or per retail transaction.

When TAM was initially established, landline telephones were the primary source of funds. Today, wireless phones significantly outnumber landline phones. Also, landline phones now include cable telephony which offers voice service using internet protocol technology (VoIP), as well as “over-the-top” VoIP where voice calls travel on the public internet. Some cable telephony providers assess the TAM surcharge on their voice customers to contribute to the TAM fund, while others argue that they are not required to collect and remit the surcharge. Over-the-top VoIP providers do not collect and remit the TAM surcharge.

Minnesota Relay is a federally mandated Telecommunications Relay Services (TRS) program that allows an individual who is deaf, hard of hearing, deafblind, or speech disabled to communicate over the telephone in a manner that is functionally equivalent to the ability of an individual who does not have hearing loss or a speech disability. Services include TTY, Voice Carry Over (VCO), Hearing Carry Over (HCO), analog captioned telephone service (CapTel), and Speech-to-Speech (STS). The Department of Commerce contracts with the DHS – TED Program for the provision of Minnesota Relay outreach services.

To access the TAM funds, DHHSD annually prepares a proposed line item budget for the TED Program. The Department of Commerce reviews the proposed budget and then incorporates the TED Program and other TAM program budgets into an annual Budget and Surcharge Recommendation, which is then submitted to the Public Utilities Commission for approval.

In addition to funding the TED program, the TAM program funds:

- Accessible News for the Blind program to provide an electronic information service (access to daily newspapers and magazines) for individuals who cannot read print materials due to vision loss, dyslexia, or a physical disability.
- Rural Real-time Captioning program to make live local television news programming in rural areas accessible to persons who deaf, hard of hearing, or deafblind.
- The Commission of Deaf, DeafBlind and Hard of Hearing Minnesotans for operational expenses.
- MN.IT for coordinating technology accessibility and usability and for a consolidated access fund for other state agencies related to accessibility of their Web-based services.
- The Legislative Coordinating Commission to provide captioning of live legislative activity streaming on their website.

IV. Addressing the needs of Minnesotans who are deaf, deafblind, hard of hearing, or who have other communication disabilities

A. What is known about these populations

Communication disabilities can affect a person's everyday functional abilities. For a person with hearing loss, the extent of the affect depends on the degree of hearing loss, when the hearing loss started, and the person's access to and willingness to use assistive devices. Hearing loss affects both the loudness and clarity of sounds we hear.

There is no exact data on the number of people with hearing loss. These are some commonly used estimates:

- 20% of the total population has some degree of hearing lossⁱⁱⁱ
- 0.9% – 2.2% have a severe to profound hearing loss (are “deaf”)^{iv}
- 33% of the total population over age 65 have hearing loss.^v

As baby boomers age, the number of people with hearing loss in Minnesota will climb. Having lived with advanced technology for many of their adult years, they can be expected to demand up-to-date telecommunications technology from the TED program. At the same time, the generation prior to the baby boomers tends to be more comfortable with traditional telephones and is often reluctant to use newer technology.

Many people with hearing loss use their vision in various ways to compensate for hearing loss. For example, they may rely on speechreading to help with communication. A vision loss combined with a hearing loss (deafblindness) has an exponential impact on a person's everyday functional abilities, affecting their ability to communicate, navigate in indoor and outdoor environments, and utilize telecommunications technology. Many people who are deafblind are capable of living independently and being self-sufficient if they have access to one-to-one, in-person supports and the appropriate technology.

DeafBlindness is a very low incidence disability. Estimates of the prevalence suggest at least 1,700 Minnesotans are deafblind and possibly up to 18,000 Minnesotans have combined significant hearing and vision loss that is severe enough to limit everyday functional abilities^{vi}. Please see [Appendix Two: Functionally Equivalent Access for Persons who are DeafBlind](#) for information about the support services a person who is deafblind might need to have functionally equivalent access to telecommunications.

The vast majority of people served in the TED program have hearing loss. However, TED also serves people who have difficulty using telecommunications because of speech or physical disabilities. A person with a speech disability could stutter, have no voice because their voice box was removed, or have a soft voice. Persons with a

physical disability could have limited use of their hands and body to answer or hold a handset. An example may be a person with quadriplegia, muscular dystrophy or multiple sclerosis.

B. Issues that impact service to these populations

In 2016, two studies were conducted involving the input of hundreds of community members, direct service providers and social service agency staff. From those studies, as well as feedback received in recent years by the Division and the Commission, it is clear that there are intersecting issues which prevent or limit functionally equivalent communication for persons who are deaf, deafblind, hard of hearing or have other communication disabilities. While these go beyond the specific task of distributing equipment as the TED program is charged to do, these issues present current and continuing challenges. While it is impossible to predict the future, it does appear highly likely that rapid technological change will continue.

Various issues at the federal level will impact services for Minnesotans with communication disabilities locally. For example, changes currently under consideration that affect Net Neutrality may result in reduced or diminished communication access according to a national organization for deaf citizens.

Key issues in Minnesota include:

- 1. Flexibility required to adapt to the rapidly changing telecommunications platforms and telephone service options.** Technology continues to advance and the methods used by consumers to communicate continues to evolve. In addition to traditional landlines, the telephone industry is transitioning to the use of internet protocol (IP) telephony. IP telephony provided by either traditional telephone companies, cable companies, or non-cable competitive local exchange carriers, continues to use the public switched telephone network for terminating calls. There are also companies that offer phone service that use the public internet (Vonage, for example). For wireless services, providers may have their own networks (Verizon, for example), or smaller wireless providers may resell the service of a larger facilities based wireless provider (TracFone, for example). In addition, companies are offering multiple services (voice, texting, video, internet) using the same network plant and customer owned devices. A smartphone, for example, may have combinations of data plans, phone service, mapping services, home security apps, and hundreds of other applications. Also, the physical network serving your home may provide voice telephony, internet, and video services.

Incompatibility of new and traditional devices. As these technology platforms change, improvements and upgrades are made by the providers. These sometimes have unintended consequences. For example, a device that allows voice to be visually displayed may work one day but not the next, due to an unannounced change in the delivery system (due to a change in phone line type, or an upgrade that renders an assistive device inoperable). Many of the devices now in use were designed for analog use, and as digital wiring becomes the norm, they are now inconsistent in their functionality, and will not perform as well or at all. Some delivery methods that are satisfactory for standard phone delivery are problematic for these adaptive devices: static in the lines may make the devices malfunction, for

example. Device manufacturers and the various phone service providers are not in sync and there is no mandate for coordination on compatibility.

The impact on users can be profound: the devices they depend on for day to day communication, emergency notification, and connection to the world can inexplicably stop working. And when that happens, it is unclear what the cause may be whether some kind of reconfiguration is needed or a new piece of equipment will fix it. TED program staff are not in a position to mitigate the issues that arise between the equipment manufacturers and phone service providers.

- 2. Geographic lack of access in all areas of Minnesota to broadband and other systems.** It is no secret Minnesota does not yet have universal access to broadband in all areas of the state. This is a larger issue for non-metro communities and rural areas, and affecting their economic and communication capabilities. For Minnesotans who are deaf, deafblind and hard of hearing, this is particularly problematic, as increasingly the technologies that would allow for functionally equivalent communications depend on high speed internet for support. While satellite internet may be available, the cost of the service is prohibitive for many in this population. Without broadband, wireless may appear to be an option. However, there are areas of the state that are not covered by any carrier; some areas are served but with limited availability and interrupted service.
- 3. Copper to fiber optic change impact.** Increasingly, the old copper lines used for traditional analog phone service and for some internet service delivery are being replaced with fiber optic lines. This change is driven both by the changing and evolving technologies and economics and has impacts on this population. The devices that worked on copper (whether analog or digital) may not work or work consistently on fiber optic. Also, there may come a time when copper lines are abandoned entirely. If this is the case, and there are any areas where fiber optic is not available, this may mean elimination of access to telecommunications service entirely.
- 4. Potential adverse impacts to TAM funding.** Decisions at the federal level and through court decrees may result in significantly decreased funding for the TED program and other efforts that TAM supports. Decisions in the Charter Communications lawsuit, currently before the Eighth Circuit Court, will determine the amount if any that Voice over Internet Protocol (VOIP) providers will be required to contribute. A decision that removes these cable companies from contributing to the fund, combined with the blurring of lines between technologies, could mean a diminished TAM fund base. In addition, the ongoing attrition from analog to digital continues to erode funding.

The telephone relay service and TED program were established when telephone service was provided with analog phone lines and it was easy for the FCC to define what telephone service was. With a single system for offering telephone service, it was clear how to fund the relay and TED programs: a surcharge was placed on each telephone line and the money collected was deposited in the TAM fund. As the definition of telecommunications has changed and now includes internet based telecommunications, there is no longer a single system upon which to place a surcharge. When the FCC decided to expand its

definition of telecommunications services and pay for the internet based relay services, new challenges were created for maintaining the TAM fund.

- 5. Hearing aid costs and availability.** A large uptick in hearing loss in the general population is occurring, in part because of baby boomers entering into their senior years. While hearing aids are available in the market, the high cost is prohibitive for many people and particularly for the population served by the TED program. There is limited coverage in many health plans and Medicare does not provide any coverage for hearing aids. While hearing aids have not been allowed under Minnesota's TED program to date, three other states authorize their use as a solution to providing functionally equivalent access to telecommunications service.

At this time, the TED program does not distribute hearing aids. However, the FDA is in the process of completing a certification process for over-the-counter assistive hearing devices called Personal Sound Amplification Products (PSAPs). It may be that in the next few years, these reasonably priced over-the-counter options will be available. At that time, it may be worth examining if the TED program could assist those who meet the income guidelines for the program with such devices.

- 6. Not all TED eligible Minnesotans can afford telephone services.** Even when phone service (via analog line, broadband, or other) is available, it may cost more than TED-eligible Minnesotans can afford. There is a requirement that certified eligible telecommunications carriers provide the federal Lifeline discount of \$9.25 per month for phone or broadband services to low-income qualified users. The Lifeline program is part of the Universal Service Fund and is offered in every state, territory, commonwealth, and on Tribal lands. However, not every service provider who offers phone services is a certified telecommunications carrier so the reach of the program has limitations.

Community members report difficulty in securing the Lifeline discounts. Anecdotal feedback describing the problems included rejection of applications for no reason; difficulty finding application information on provider websites; contradictory instructions; difficulty in appealing unfavorable decisions. For many people, the amounts of the discounts are not sufficient given the high cost of bundled services which is increasingly the more typical way that consumers purchase telephone service. In addition, the FCC recently took action to significantly reduce the number of tribal members eligible to participate in these programs.

Another resource to help with service costs is the Minnesota Telephone Assistance Plan (TAP). TAP provides a \$3.50 credit on wired line phone services to qualified users.

C. The TED Program

How this program serves the population

The TED program is designed to provide assistive technology that is intended to allow users a functional equivalent experience of telephone access. A person who is deaf, deafblind, hard of hearing or who has another communication disability may apply for the TED program if they:

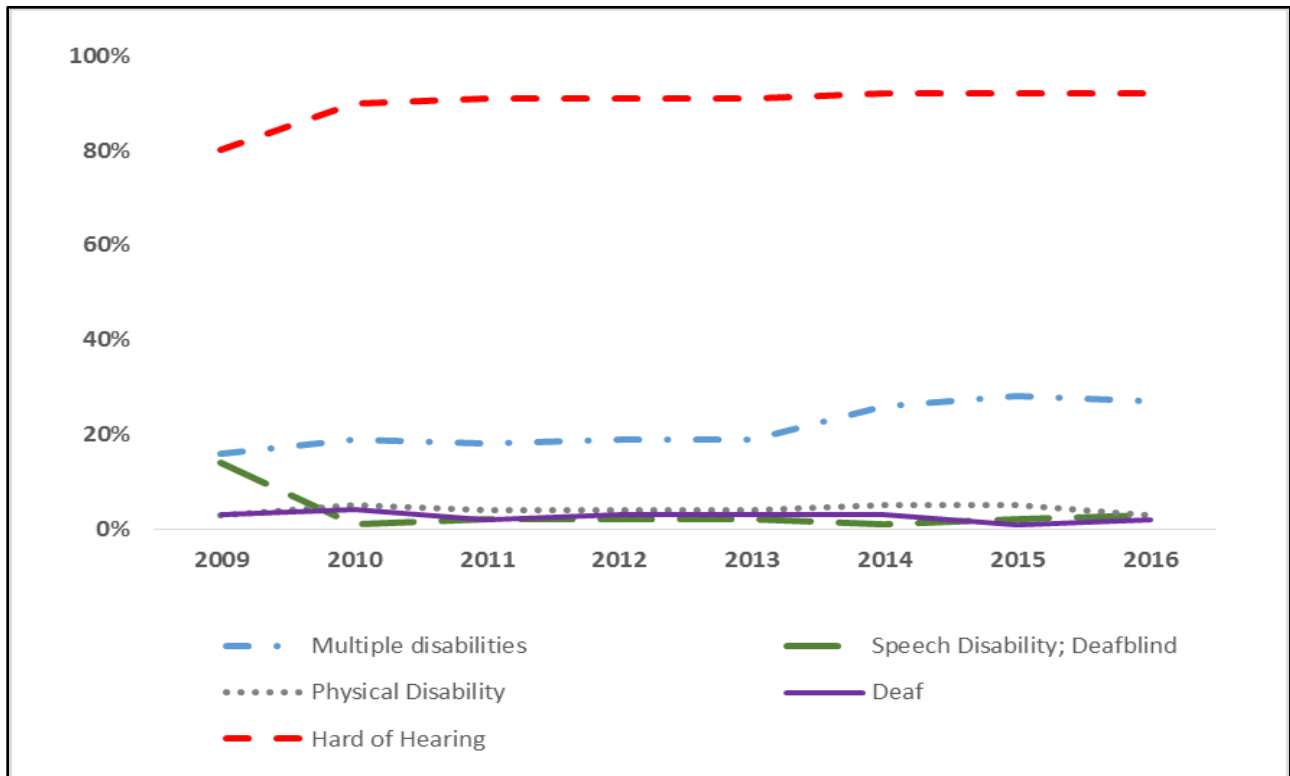
1. Have a hearing loss, speech or physical disability that limits use of a standard telephone;
2. Are at or below the state median gross income guidelines;
3. Have telephone service in their home or have applied for telephone service; and
4. Can benefit from the devices in the TED program.

Currently, persons accepted into the program have the option of the following types of equipment:

- Amplified Telephones
- Bluetooth Cordless Amplified Phones
- Captioned Telephones
- Remote Control Speaker Phones
- Amplified Cell Phones
- Hearing Carry Over Phones
- Voice Carry Over Phones
- Basic Smartphone for Seniors
- Wireless Accessories
- Ring Signaling Devices
- Text Telephones (TTYs)
- Special Needs Devices (for people with multiple disabilities)
- iOS Tablets and Smartphones (for pilot program)

The charts below illustrate the persons with disabilities served from 2009- 2016 and the types of equipment provided by TED over that same time frame.

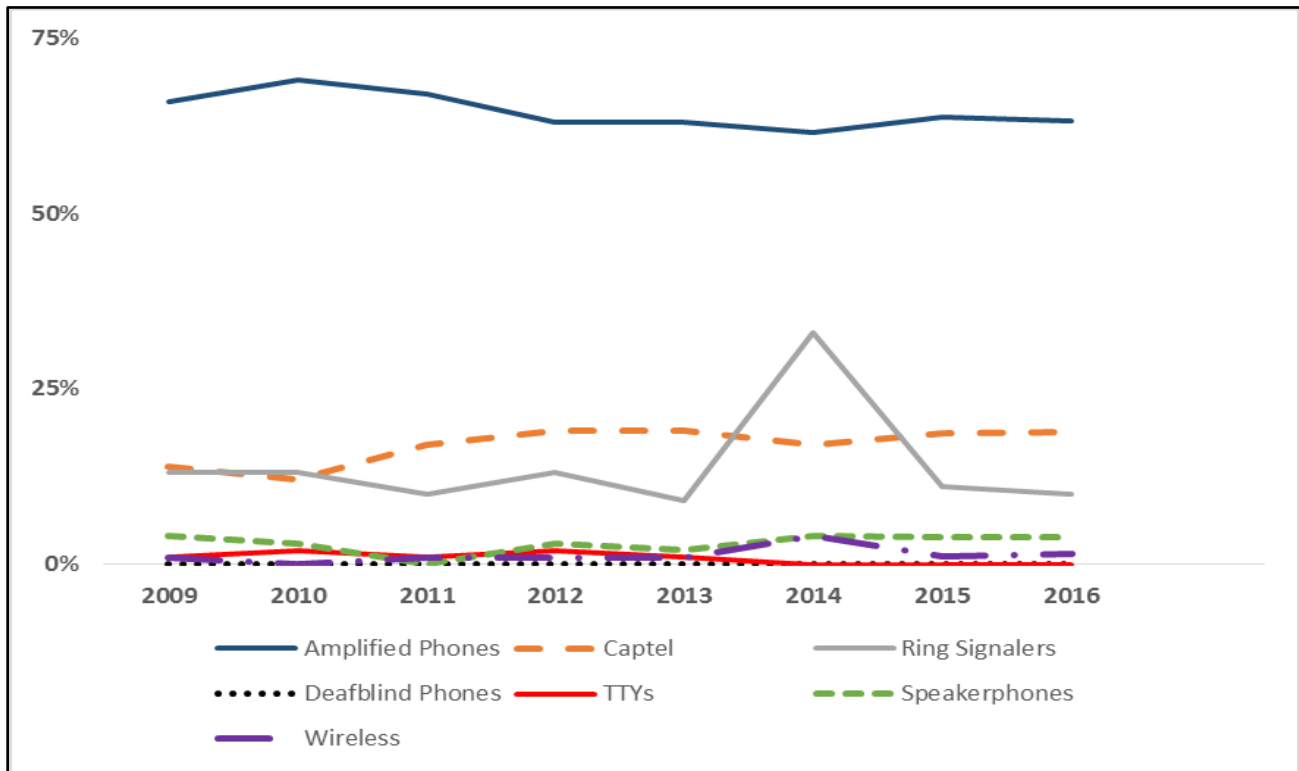
Graph 1. Trends in types of communication disabilities of people served in TED program



Data table 1. Trends in types of communication disabilities of people served in TED program

Calendar Year	Multiple disabilities	Speech Disability; Deafblind	Physical Disability	Deaf	Hard of Hearing
2009	16%	14%	3%	3%	80%
2010	19%	1%	5%	4%	90%
2011	18%	2%	4%	2%	91%
2012	19%	2%	4%	3%	91%
2013	19%	2%	4%	3%	91%
2014	26%	1%	5%	3%	92%
2015	28%	2%	5%	1%	92%
2016	27%	3%	3%	2%	92%

Graph 2. Trends in types of equipment provided by the TED program



Data table 2. Trends in types of equipment provided by the TED program

Calendar Year	Amplified Phones	Captel	Ring Signalers	Deafblind Phones	TTYs	Speaker phones	Wireless
2009	66%	14%	13%	<1%	1%	4%	1%
2010	69%	12%	13%	<1%	2%	3%	<1%
2011	67%	17%	10%	<1%	1%	<1%	1%
2012	63%	19%	13%	<1%	2%	3%	1%
2013	63%	19%	9%	<1%	1%	2%	1%
2014	62%	17%	33%	<1%	<1%	4%	4%
2015	64%	19%	11%	<1%	<1%	4%	1%
2016	63%	19%	10%	<1%	<1%	4%	1%

Need for agile definitions of equipment and services available under the TED program

As stated in the previous section, the rapid development of technology provides both challenges and opportunities. The major challenge is presented by the changing delivery platforms that are rapidly making

assistive technology devices obsolete or sub-functional. The opportunity is the rapid development of new technologies that can make functional equivalent communication a reality for more Minnesotans who are deaf, deafblind, hard of hearing and who have other communication disabilities. The rate of this development is such that it is impossible to predict next level innovations by name or type. In the past, it was reasonable and sufficient to include specifics in legislative and program language to name a product or type of product, it is no longer reasonable or sufficient to limit future program offerings to items that currently exist.

In comparing what Minnesota has historically included in its TED program through the TAM fund with other states who are operating similar programs, it appears Minnesota has employed a narrower list of what is allowable under its program. Other states include safety notification devices and devices such as hearing aids, where Minnesota does not. See [Appendix One: Review of Other States' TED Equipment Offerings](#) for a list of other states' equipment choices.

As mentioned previously, Minnesota's TED program has not offered hearing aids, in part because of the high cost. Currently, the FDA is in the process of considering certification of low cost, over-the-counter, personal hearing amplification devices. Once devices such as those become readily available, it's important for the TED program to be able to offer them as a tool for making telephone usage more functionally equivalent for people with communication disabilities.

Need for flexibility to address needs of specific populations

As part of its implementation under the Olmsted decision, the Department of Human Services has instituted a person-centered approach. This means taking the unique needs of the individual Minnesotan into account as services are identified, designed and/or provided. In carrying out this person-centered approach, the TED program needs the flexibility to address particular needs.

One example of particular needs would be for Minnesotans who are deafblind. The challenges to providing functionally equivalent communication for the deafblind population include:

1. Reconciling the speed of voice transmission with the speed of Braille delivery and the ability of the person to read Braille at that speed;
2. Inconsistency in equipment interoperability;
3. Absence of available assistance 24/7 to provide interpreter services in lieu of an effective technology option.

For this particular population, solutions include offering assistive technology options although this is less than ideal for some individuals who are deafblind. An emerging idea for moving closer to functional equivalence for this group of people is to provide communication facilitators in a systematic way. Please see [Appendix Two: Functionally Equivalent Access for Persons who are DeafBlind](#) for further discussion of this concept.

Need for program modernization

In recent years, TED has modernized its program administration by:

- Storing all client files electronically

- Establishing and maintained a centralized database of client, agency and inventory information
- Utilizing a more cost-effective delivery system where equipment ordering and return services are performed from an outside equipment vendor
- Requesting that clients recycle their outdated equipment
- Expanded equipment options to cell phones, wireless accessories and iPad/iPhone (pilot program).

Currently, the TED program and the DHHS division are taking the following steps to further modernize (see the [Section V. Report recommendations](#) section of this report for further description):

- Developing resources that provide basic information to clients about assistive technology options
- Updating and more effectively using the TED program website
- Developing an online application form and process
- Improving outreach to potential clients
- Creating new measures to evaluate effectiveness.

V. Report recommendations

The Department of Human Services and the Commission of Deaf, Deafblind and Hard of Hearing Minnesotans propose the following recommendations for modernizing the TED program. Some require changes in existing statute; others can be accomplished without legislation.

Statutory changes

The suggested statute changes that are needed to implement these recommendations are in [Section VI. Implementation language](#).

- 1. Add language to statute that allows TED to distribute up to date, functionally equivalent products.** TED should be allowed to provide interconnectivity products that allow functionally equivalent communication for persons with communication disabilities. To do this, language is needed that allows TED to identify the most useful interconnectivity products. Interconnectivity products include equipment or ancillary/secondary devices that act as a bridge to improve communication such as a Bluetooth headpiece that connects to a hearing aid or communication apps for a smart phone or other sound amplifying device that allows a program participant to use telecommunications in a functionally equivalent way.
- 2. Add language for use of the TAM fund to include multi-functional safety devices.** Increasingly, multi-functional alerting devices are more available to consumers. It is becoming commonplace for an alerting device to not only alert a person when the phone is ringing and to also send an alert when the doorbell is ringing, there is a weather emergency update, the carbon monoxide detector goes off, and a smoke detector has been activated.
- 3. Add language so that TED specialists are able to introduce and educate clients on their assistive technology options.** Using the home visits and other contacts that are already occurring in the program, TED specialists can introduce their clients to the array of assistive technology options that are available to people who are deaf, deafblind, hard of hearing or who have other communication disabilities.
- 4. Add language so that TED specialists may assist people who are eligible for TED in applying for discounts on monthly telecommunications service costs.** This change will allow TED specialists to help applicants and participants apply for programs that provide discounts on monthly telephone service costs. Navigating the discount program options and completing the application process can be an arduous and frustrating process for some people who are deaf, deafblind, or hard of hearing and people who have other communication disabilities.

Operational changes

The following recommendations are already underway and do not require statutory changes.

5. **Update and more effectively use the TED website.** DHHSD will develop a stand-alone, consumer-friendly website in fiscal year 2018. The intent is to provide easily accessible information, possibly including videos for training on devices that are available, on installation and use of devices, etc. Other accessible videos could include educational videos on other assistive technology available and the program's standard TED presentation to consumers and service providers. Many of the issues TED users encounter could be effectively addressed through website information and access.
6. **Develop an online application form and process.** The division is already engaged in development of the online application, to be used in concert with the new website. The online application will also be integrated with the division's new database which is near completion for the TED program.
7. **Improve communication about the TED program.** The very people who are in need of TED services are most likely to have become isolated and "out of the loop" because of their inability to communicate. Making outreach a priority is a part of the division's plans to modernize the TED program. To do this, the TED program will strengthen statewide coordinated efforts of TED field staff and central office staff to assure an effective outreach effort is implemented.
8. **Create new measures to assess program effectiveness.** The TED program is currently updating the performance and outcome measures it uses to evaluate its outreach effectiveness and the success of the program.
9. **Continue to examine the possible use of vouchers as a mechanism for distributing devices.** An option that some states use for getting devices to program participants is the use of vouchers. With a voucher, the consumer has more flexibility to choose a device that meets their unique needs. If vouchers would be used, the TED program would set the parameters for its use – including the maximum dollar amount available, types of devices allowed, specific vendors to use, and so on – and then the consumer would shop for and purchase the device that best meets their needs. While the TED program is not planning to use vouchers at this time, it will continue to assess this option as a mechanism for modernizing the program in the future.

Implications for decision makers

If no action is taken as a result of this report, the TED program will continue operating as is. As demonstrated in this report, the current TED program is restricted in its ability to accommodate the changing telecommunication needs of Minnesotans with communication disabilities. For the TED program to stay current with the many new and upcoming technology options that allow functionally equivalent access to telecommunications, the statute changes recommended in this report are needed.

If the recommended statutory changes are considered, the cost of the changes will need to be determined.

Recommendations #1 and #2 will add cost to the TED program because they will expand the equipment options TED provides. It is possible the surcharge/fee collected per telephone line may need to increase to pay for the expansion but a change in the maximum allowable surcharge amount allowed for the TAM fund under current law would not be expected. Please see the ["TAM Fund" section in the Introduction](#) for more information about the TAM fund and how the surcharge/fee is set.

Recommendation #3 is not expected to add cost to the program. Recommendation #4 may have a cost in the future, depending on the demand for this assistance. At this time additional staffing is not needed to implement #4 and the cost of training current staff to deliver this service is expected to be minimal.

VI. Implementation language

2017 Minnesota Statutes

237.50 DEFINITIONS.

Subdivision 1. **Scope.** The terms used in sections 237.50 to 237.56 have the meanings given them in this section.

Subd. 2. [Repealed, 1995 c 190 s 17]

Subd. 3. **Communication disability.** "Communication disability" means certified as having a hearing loss, speech disability, or physical disability that makes it difficult or impossible to use telecommunications services and equipment.

Subd. 4. [Repealed by amendment, 2012 c 216 art 10 s 1]

Subd. 4a. **Deaf.** "Deaf" means a hearing loss of such severity that the individual must depend primarily upon visual communication such as writing, lip reading, sign language, and gestures.

Subd. 4b. **Deafblind.** "Deafblind" means any multi-functional of vision and hearing loss which interferes with acquiring information from the environment to the extent that compensatory strategies and skills are necessary to access that or other information.

Subd. 4c. **Discounted Telecommunications Services.** "Discounted telecommunications services" means private, non-profit, and public programs intended to subsidize or reduce the monthly costs of telecommunications services for people who meet the programs' established income guidelines.

Subd. 5. [Repealed by amendment, 2012 c 216 art 10 s 1]

Subd. 6. **Fund.** "Fund" means the telecommunications access Minnesota fund established in section 237.52.

Subd. 6a. **Hard-of-hearing.** "Hard-of-hearing" means a hearing loss resulting in a functional limitation, but not to the extent that the individual must depend primarily upon visual communication in all interactions.

Subd. 6b. **Interconnectivity products.** "Interconnectivity products" means accessories, applications, devices and products that a person with a communication disability needs to use in conjunction with a telecommunications device to have functionally equivalent access to telecommunications services. Interconnectivity products may include hearing aid streamers, Bluetooth-enabled devices, advanced communications apps for a smart phone, and any other products the Department of Human Services deems appropriate.

Subd. 6c. **Multi-functional safety devices.** "Multi-functional safety devices" means alerting devices that are have several functions such as a telephone ring signaler that also alerts a person with a communication disability to the doorbell, smoke alarm, carbon monoxide alarm, noises in an adjoining room and other environmental sounds.

Subd. 7. [Repealed by amendment, 2012 c 216 art 10 s 1]
Subd. 8. [Repealed by amendment, 2012 c 216 art 10 s 1]
Subd. 9. [Repealed by amendment, 2012 c 216 art 10 s 1]
Subd. 10. [Repealed by amendment, 2012 c 216 art 10 s 1]

Subd. 10a. **Telecommunications device.** "Telecommunications device" means a device that (1) allows a person with a communication disability to have access to telecommunications services as defined in subdivision 13, and (2) is specifically selected by the Department of Human Services for its capacity to allow persons with communication disabilities to use telecommunications services in a manner that is functionally equivalent to the ability of an individual who does not have a communication disability. A telecommunications device may include a ring signaler, an amplified telephone, a hands-free telephone, a text telephone, a captioned telephone, a wireless device, a device that produces Braille output for use with a telephone, and any other device the Department of Human Services deems appropriate.

Subd. 11. **Telecommunications Relay Services.** "Telecommunications Relay Services" or "TRS" means the telecommunications transmission services required under Federal Communications Commission regulations at Code of Federal Regulations, title 47, sections 64.604 to 64.606. TRS allows an individual who has a communication disability to use telecommunications services in a manner that is functionally equivalent to the ability of an individual who does not have a communication disability.

Subd. 12. **Telecommunications.** "Telecommunications" means the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received.

Subd. 13. **Telecommunications services.** "Telecommunications services" means the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available to the public, regardless of the facilities used.

237.51 TELECOMMUNICATIONS ACCESS MINNESOTA PROGRAM ADMINISTRATION.

Subdivision 1. **Creation.** The commissioner of commerce shall:

- (1) administer through interagency agreement with the commissioner of human services a program to distribute telecommunications devices, interconnectivity products, and multi-functional safety devices to eligible persons who have communication disabilities; and
- (2) contract with one or more qualified vendors that serve persons who have communication disabilities to provide telecommunications relay services.

For purposes of sections 237.51 to 237.56, the Department of Commerce and any organization with which it contracts pursuant to this section or section 237.54, subdivision 2, are not telephone companies or telecommunications carriers as defined in section 237.01.

Subd. 2. [Repealed, 1995 c 190 s 17]
Subd. 3. [Repealed, 1995 c 190 s 17]
Subd. 4. [Repealed, 1995 c 190 s 17]

Subd. 5. **Commissioner of commerce duties.** In addition to any duties specified elsewhere in sections 237.51 to 237.56, the commissioner of commerce shall:

- (1) prepare the reports required by section 237.55;
- (2) administer the fund created in section 237.52; and

(3) adopt rules under chapter 14 to implement the provisions of sections 237.50 to 237.56.

Subd. 5a. **Commissioner of human services duties.** (a) In addition to any duties specified elsewhere in sections 237.51 to 237.56, the commissioner of human services shall:

- (1) define economic hardship, special needs, and household criteria so as to determine the priority of eligible applicants for initial distribution of devices and products and to determine circumstances necessitating provision of more than one telecommunications device per household;
- (2) establish a method to verify eligibility requirements;
- (3) establish specifications for telecommunications devices, interconnectivity products, and multi-functional safety devices to be provided under section 237.53, subdivision 3;
- (4) inform the public and specifically persons who have communication disabilities of the program; ~~and~~
- (5) provide devices based on the assessed need of eligible applicants; and
- (6) assist a program applicant in applying for discounted telecommunications service so that the person could meet the eligibility criteria in section 237.53 subd. 2(5).

(b) The commissioner may establish an advisory board to advise the department in carrying out the duties specified in this section and to advise the commissioner of commerce in carrying out duties under section 237.54. If so established, the advisory board must include, at a minimum, the following persons:

- (1) at least one member who is deaf;
- (2) at least one member who has a speech disability;
- (3) at least one member who has a physical disability that makes it difficult or impossible for the person to access telecommunications services; and
- (4) at least one member who is hard-of-hearing.

The membership terms, compensation, and removal of members and the filling of membership vacancies are governed by section 15.059. Advisory board meetings shall be held at the discretion of the commissioner.

Subd. 6. [Repealed, 1995 c 190 s 17]

237.52 TELECOMMUNICATIONS ACCESS MINNESOTA FUND.

Subdivision 1. **Fund established.** A telecommunications access Minnesota fund is established as an account in the state treasury. Earnings, such as interest, dividends, and any other earnings arising from fund assets, must be credited to the fund.

Subd. 2. **Assessment.** (a) The commissioner of commerce, the commissioner of employment and economic development, and the commissioner of human services shall annually recommend to the Public Utilities Commission an adequate and appropriate surcharge and budget to implement sections 237.50 to 237.56, 248.062, and 256C.30, respectively. The maximum annual budget for section 248.062 must not exceed \$100,000 and for section 256C.30 must not exceed \$300,000. The Public Utilities Commission shall review the budgets for reasonableness and may modify the budget to the extent it is unreasonable. The commission shall annually determine the funding mechanism to be used within 60 days of receipt of the recommendation of the departments and shall order the imposition of surcharges effective on the earliest practicable date. The commission shall establish a monthly charge no greater than 20 cents for each customer access line, including trunk equivalents as designated by the commission pursuant to section 403.11, subdivision 1.

(b) If the fund balance falls below a level capable of fully supporting all programs eligible under subdivision 5 and sections 248.062 and 256C.30, expenditures under sections 248.062 and 256C.30 shall be reduced on a pro rata basis and expenditures under sections 237.53 and 237.54 shall be fully funded.

Expenditures under sections 248.062 and 256C.30 shall resume at fully funded levels when the commissioner of commerce determines there is a sufficient fund balance to fully fund those expenditures.

Subd. 3. **Collection.** Every provider of services capable of originating a TRS call, including cellular communications and other nonwire access services, in this state shall, except as provided in subdivision 3a, collect the charges established by the commission under subdivision 2 and transfer amounts collected to the commissioner of public safety in the same manner as provided in section 403.11, subdivision 1, paragraph (d). The commissioner of public safety must deposit the receipts in the fund established in subdivision 1.

Subd. 3a. **Fee for prepaid wireless telecommunications service.** The fee established in subdivision 2 does not apply to prepaid wireless telecommunications services as defined in section 403.02, subdivision 17b, which are instead subject to the prepaid wireless telecommunications access Minnesota fee established in section 403.161, subdivision 1, paragraph (b). Collection, remittance, and deposit of prepaid wireless telecommunications access Minnesota fees are governed by sections 403.161 and 403.162.

Subd. 4. **Appropriation.** Money in the fund is appropriated to the commissioner of commerce to implement sections 237.51 to 237.56, to the commissioner of employment and economic development to implement section 248.062, and to the commissioner of human services to implement section 256C.30.

Subd. 5. **Expenditures.** (a) Money in the fund may only be used for:

- (1) expenses of the Department of Commerce, including personnel cost, public relations, advisory board members' expenses, preparation of reports, and other reasonable expenses not to exceed ten percent of total program expenditures;
- (2) reimbursing the commissioner of human services for purchases made or services provided pursuant to section 237.53; and
- (3) contracting for the provision of TRS required by section 237.54.

(b) All costs directly associated with the establishment of the program, the purchase and distribution of telecommunications devices, interconnectivity products, and multi-functional safety devices and the provision of TRS are either reimbursable or directly payable from the fund after authorization by the commissioner of commerce. The commissioner of commerce shall contract with one or more TRS providers to indemnify the telecommunications service providers for any fines imposed by the Federal Communications Commission related to the failure of the relay service to comply with federal service standards. Notwithstanding section 16A.41, the commissioner may advance money to the TRS providers if the providers establish to the commissioner's satisfaction that the advance payment is necessary for the provision of the service. The advance payment may be used only for working capital reserve for the operation of the service. The advance payment must be offset or repaid by the end of the contract fiscal year together with interest accrued from the date of payment.

237.53 TELECOMMUNICATIONS DEVICE, INTERCONNECTIVITY PRODUCTS AND MULTI-FUNCTIONAL SAFETY DEVICES.

Subdivision 1. **Application.** A person applying for a telecommunications device, interconnectivity products, and multi-functional safety devices under this section must apply to the program administrator on a form prescribed by the Department of Human Services.

Subd. 2. **Eligibility.** To be eligible to obtain a telecommunications device, interconnectivity products, and multi-functional safety devices under this section, a person must:

- (1) be able to benefit from and use the equipment for its intended purpose;
- (2) have a communication disability;
- (3) be a resident of the state;
- (4) be a resident in a household that has a median income at or below the applicable median household income in the state, except a person who is deafblind applying for a Braille device may reside in a household that has a median income no more than 150 percent of the applicable median household income in the state; and
- (5) be a resident in a household that has telecommunications service or that has made application for service and has been assigned a telephone number; or a resident in a residential care facility, such as a nursing home or group home where telecommunications service is not included as part of overall service provision.

Subd. 3. Assessment of needs. After a person is determined to be eligible for and is accepted into the program, the commissioner of human services shall assess the person's telecommunications needs including: (1) type of telecommunications device that provides the person with functionally equivalent access to telecommunications services; (2) interconnectivity products that are needed for the person to receive functionally equivalent benefit from the telecommunications device the person receives; and (3) multi-functional safety devices that are needed for the person to be alerted to such things as a ringing telephone, smoke alarms, carbon monoxide alarms, and noises in other rooms in the home.

Subd. 3 (4). Distribution. The commissioner of human services shall (a) purchase and distribute a sufficient number of telecommunications devices, interconnectivity products, and multi-functional safety devices so that each eligible household receives appropriate devices and products as determined under section 237.51, subdivision 5a, and (b) The commissioner of human services distribute the devices and products to eligible households free of charge.

Subd. 4 (5). Training; information; maintenance. The commissioner of human services shall (a) maintain the telecommunications devices, interconnectivity products and multi-functional safety devices until the warranty period expires, ~~and~~

(b) provide training, without charge, to first-time users of the devices and products, and

(c) provide information about assistive communications devices and products that may be of benefit to the program participant and where assistive communications devices and products can be obtained or purchased. Assistive communications devices and products includes items such as pocket talkers for a person who is hard of hearing, communication boards for a person with a speech disability, one-to-one video communication applications for people who are deaf, and other devices and products that are designed to facilitate communication and are effective for people with communication disabilities.

Subd. 5 (6). [Repealed by amendment, 2012 c 216 art 10 s 4]

Subd. 6 (7). Ownership. (a) Telecommunications devices, interconnectivity products or multi-functional safety devices purchased pursuant to subdivision 3(a) are the property of the state of Minnesota. Policies and procedures for the return of devices and products that have been distributed through the program ~~from individuals who withdraw from the program or whose eligibility status changes~~ shall be determined by the commissioner of human services.

Subd. 7 (7a). **Standards.** The telecommunications devices distributed under this section must comply with the electronic industries alliance standards and be approved by the Federal Communications Commission. The commissioner of human services must provide each eligible person a choice of several models of devices, the retail value of which may not exceed \$600 for a text telephone, and a retail value of \$7,000 for a Braille device, or an amount authorized by the Department of Human Services for all other telecommunications devices, ~~and~~ auxiliary equipment, interconnectivity products, and multi-functional safety devices it deems cost-effective and appropriate to distribute according to sections 237.51 to 237.56.

Subd. (7b). **Discounted Telecommunications Services Assistance.** The commissioner of human services shall assist program applicants who do not meet the eligibility criteria in section 237.53 subd. (2)5 in applying for discounted telecommunications services programs so that the applicant may be able to meet the eligibility criteria.

Subd. 8. [Repealed, 1988 c 621 s 19]

237.54 TELECOMMUNICATIONS RELAY SERVICES (TRS).

Subdivision 1. [Repealed, 1995 c 190 s 17]

Subd. 2. **Operation.** (a) The commissioner of commerce shall contract with one or more qualified vendors for the provision of Telecommunications Relay Services (TRS).

(b) The TRS providers shall operate the relay service within the state of Minnesota. The TRS providers shall comply with all current and subsequent Federal Communications Commission regulations at Code of Federal Regulations, title 47, sections 64.601 to 64.606, and shall inform persons who have communication disabilities and the public of the availability and use of TRS.

237.55 ANNUAL REPORT ON TELECOMMUNICATIONS ACCESS.

The commissioner of commerce must prepare a report for presentation to the Public Utilities Commission by January 31 of each year. Each report must review the accessibility of telecommunications services to persons who have communication disabilities, describe services provided, account for annual revenues and expenditures for each aspect of the fund to date, and include predicted program future operation.

237.56 ADEQUATE SERVICE ENFORCEMENT.

The services required to be provided under sections 237.50 to 237.55 may be enforced under section 237.081 upon a complaint of at least two persons within the service area of any one telecommunications service provider, provided that if only one person within the service area of a company is receiving service under sections 237.50 to 237.55, the Public Utilities Commission may proceed upon a complaint from that person.

VII. Appendix

Appendix One: Review of Other States’ Equipment Offerings

Equipment Distributed at Other State Equipment Distribution Programs (EDPs)

The states listed below are highlighted to represent EDPs that distribute “out-of-the-box” assistive technology solutions. The programs also provide standard equipment including: amplified phones, ring signalers, captioned phones, hand-free speaker phones and TTYs.

State	Equipment offered	Type of funding	Type of lines
Arizona	Bluetooth enabled accessories	Unknown	Unknown
Arkansas	iPads and/or iPhones (may be full distribution program or pilot)	Surcharge	Landline, wireless
Colorado	iPads and/or iPhones (may be full distribution program or pilot)	Telephone Users with Disability Fund via public utilities commission	Landline, wireless, VoIP
Georgia	iPads and/or iPhones (may be full distribution program or pilot)	Special revenue surcharge	Landline
Indiana	iPads and/or iPhones (may be full distribution program or pilot)	Telecommunications Relay Surcharge	Landline, wireless, prepaid wireless, VoIP
Iowa	iPads and/or iPhones (may be full distribution program or pilot)	Not a surcharge; through Iowa Utility Board; they bill telephone companies	Landline, wireless
Kentucky	WiFi only iPads and/or iPhones; alerting systems (telephone, bed, doorbell, smoke detector, carbon monoxide); pays 1 year service fee of \$400 in first year	Surcharge, special revenue	Landline, wireless, some VoIP lines

State	Equipment offered	Type of funding	Type of lines
Maine	Hearing aids	Public and private grants, private donations	Unknown
Maryland	iPads and/or iPhones (may be full distribution program or pilot)	Universal Service Trust Fund (telephone subscriber surcharge)	Landline, wireless, VoIP
Missouri	iPads and/or iPhones (may be full distribution program or pilot)	Unknown	Landline, Internet, wireless
Montana	iPads and/or iPhones (may be full distribution program or pilot)	Unknown	Unknown
New Mexico	iPads and/or iPhones (may be full distribution program or pilot); smoke detector with notification system, bed shakers, Bluetooth accessories used with cell phones, alerting systems (telephone, doorbell, baby cry signaler, alarm clock), public emergency alerting system, neck loops	Telecommunications Relay Surcharge	Landline, wireless, prepaid wireless, VoIP
North Carolina	One hearing aid per client with T coil; 90% of their distribution is hearing aids	Special revenue surcharge	Landline, wireless
Oklahoma	One non-digital hearing aid for a child or senior (who have no other option); wireless doorbell light flashers; visual or audio alerting devices (clock, phone, VP, doorbell)	Senior Citizens Hearing Aid Program is administered by Department of Rehabilitation Services Children's Hearing Aid Program is administered by Oklahoma School for the Deaf	Unknown

State	Equipment offered	Type of funding	Type of lines
Oregon	iPads and/or iPhones (may be full distribution program or pilot)	Surcharge on phone lines	Landline, wireless, interconnected VoIP subscribers
Pennsylvania	iPads and/or iPhones (may be full distribution program or pilot)	Unknown	Unknown
South Carolina	Alerting devices for alarm clock	Special Revenue Surcharge	Landline, wireless, pre-paid wireless, VoIP
South Dakota	Blue tooth cell phone accessories; amplified cell phones	Unknown	Home phone Cellular Internet
Tennessee	iPads and/or iPhones (may be full distribution program or pilot)	Unknown	Unknown
Texas	iPads and/or iPhones (may be full distribution program or pilot)	Universal service fund surcharge on utility customer's bills	Unknown
Utah	iPads and/or iPhones (may be full distribution program or pilot)	Unknown	Unknown
Washington	iPads and/or iPhones (may be full distribution program or pilot)	General Fund	Unknown

Appendix Two: Functionally Equivalent Access for Persons who are DeafBlind

As a part of a follow-up discussion to the 2016 study^{vii} and the exploration of TED modernization, MNCDHH invited two Minnesotans who are deafblind to demonstrate the use of communication facilitation and describe options for accessing telecommunications services. While these concepts go beyond the current TED program role of distributing equipment, it is an intriguing approach to providing functionally equivalent telecommunications access for individuals who are deafblind.

Options for telecommunications access

- *Email relay*: a person who is deafblind sends instructions via email (for example: “Call Tony’s Pizza and order me a large pepperoni for delivery to 123 Oak Street in St. Paul at 6 pm tonight”), and the relay staff person receiving the email places the order, then sends a confirmation email to the person who is deafblind.
- *Communication facilitators*: a communication facilitator meets the person who is deafblind at a destination chosen by that person (home or elsewhere) and provides real time interpretation of the phone conversation. The person who is deafblind can communicate in their chosen way (for example, through American Sign Language) and the communication facilitator then relays that message to the other party in the phone conversation. In return, the communication facilitator receives and interprets the spoken message and so the person who is deafblind can receive the message.
- Both approaches allow for communication that is more functionally equivalent to phone conversations experienced by the general public.

Communication facilitators address some key needs

- People who are deafblind need the ability to hold a conversation with other parties over the phone. This can be for personal conversations, medical conversations, or any other situation that the general public may use the telephone for.
- Current technology does not support functionally equivalent access to telecommunications for many people who are deafblind. Braille technology conveys information but it is not conducive for natural interactions and is not practical for real-time phone conversations. The back-and-forth of phone conversations happens rapidly and it is not possible to read Braille output that quickly and formulate responses. Other technology that enlarges visual displays for people who are deafblind and have some usable vision poses the same problem: the speed of natural phone conversations is too rapid for a person who is deafblind to have functionally equivalent access.
- A person who is deafblind should not have to pay out of pocket for interpreting services in order to use the same telecommunications service that is available to the general public.

Making communication facilitators an option in Minnesota

Currently, Washington State is the only state with a communication facilitator program. It is operated through an agency that receives requests from persons who are deafblind and matches each request with a facilitator. The requests must be made in advance. At this time, the service is limited to just a few areas of the state.

Members of the Minnesota deafblind community are interested in developing a pilot project that would explore the cost and feasibility of providing communication facilitators service in Minnesota. To support more equitable access to telecommunications services for people who are deafblind, DHS and MNCDHH believe a pilot project would offer useful insights into the benefits and costs of this service.

Appendix Three: Project process and work group participants

The Department of Human Services (DHS) worked in cooperation with the Commission of Deaf, DeafBlind and Hard of Hearing Minnesotans (MNCDHH) to develop this report and the recommendations.

To identify ways to modernize the TED program and prepare for writing the report, DHS established a work group to gather information on the issues and opportunities for modernizing the TED program. DHS invited representative from MNCDHH and the Department of Commerce to participate in work group discussions. The group met on five occasions between September and November of 2017 to share perspectives, discuss ideas for modernizing the program, and identify issues facing the future of TED, the TAM fund, and functionally equivalent access to telecommunications for people who are deaf, deafblind, and hard of hearing or others who have communication disabilities.

Through Minnesota Management and Budget, DHS hired Judy Plante from Lanterna Consulting to facilitate the planning process and work group meetings and to assist DHS and MNCDHH in drafting this report.

Thank you to the work group members for their insights about modernizing the TED program and to Judy Plante for shepherding us through this project.

Thank you to MNCDHH for its collaboration in determining the TED modernization recommendations and creating this report.

Work group members

Commission of Deaf, DeafBlind and Hard of Hearing Minnesotans

Lloyd Ballinger, MNCDHH Board Member

Mary Hartnett, Executive Director

DHS Deaf and Hard of Hearing Services Division

Olivia Anderson, Legislative Coordinator, DHS Community Supports Administration

Sarah Maheswaran, TED Program Administrator

Amy McQuaid-Swanson, DHHSD Acting Director

Jan Radatz, DHHSD Program Development Supervisor

Department of Commerce

Rochelle Garrow, TAM Administrator

Greg Doyle, Telecommunications Manager

Megan Verdeja, Special Assistant to the Chief of Staff

Alison Groebner, Director of Government Affairs

Jonathan Kelly, Government Affairs Liaison

Appendix Four: Examples of TED Equipment, Past and Present

- 1988 – TTYs, light signalers, and TTYs with large visual displays
 - Today, fewer than 35 TTYs (0.9% of all equipment) are distributed per year
 - Amplified handsets and in-line amplifiers for hard of hearing persons have been replaced by amplified phones
- 1994 – hands-free speakerphones for those with physical disability
 - Still provided today
- 2001 – 2 way pagers to access emergency alert information
 - Outdated equipment that is no longer provided
- 2008 – Captel phone
 - Still provided today
- 2009 – wireless pilot
 - Led to permanent addition of cell phones to TED
- 2011 – began providing MN Relay Outreach Services (previously Commerce provided via a contract with Communication Services for the Deaf)
- 2013 – cell phones and wireless accessories
 - Three cell phones options available including a simple smart phone; primary function of the cell phone is telephone calls
- 2016 – smart phone/tablet pilot phase one
 - Will continue pilot phase two starting January 2018

Endnotes

ⁱSee [DHS Report to the Legislature, Analysis of Deaf, DeafBlind and Hard of Hearing Services](#).

ⁱⁱ The Minnesota State Demographers office reports that according to data from the 2011-2015 American Community Survey (ACS) reports 23.6% (44,614) of Minnesotans with hearing difficulty were living below 135% of the poverty rate.

ⁱⁱⁱ See [“One in Five Americans Has Hearing Loss”](#) by Dr. Frank Lin of the Johns Hopkins School of Medicine.

^{iv} [Gallaudet University](#) estimates that 9 to 22 out of every 1,000 people have a severe hearing loss or are deaf.

^v National Institutes of Health’s [National Institute on Deafness and Other Communication Disorders](#) estimates that 1 in 3 people between ages 65-74 have hearing loss and nearly half the people age 75+ have difficulty hearing.

^{vi} Estimates of deafblindness by the [National Center on DeafBlindness](#) range between .02% and .03% of the general population; Helen Keller National Center estimates 0.3% of the general population has a significant combined hearing and vision loss.

^{vii}See [DHS Report to the Legislature, Analysis of Deaf, DeafBlind and Hard of Hearing Services](#).