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May 20, 2015

VIA ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Re: Supplemental *Ex Parte* Letter in CG Docket Nos. 10-51 and 03-123

Dear Ms. Dortch:

On behalf of Telecommunications for the Deaf and Hard of Hearing, Inc. ("TDI"), this letter supplements the letter filed in the above-referenced proceedings about an ex parte meeting on May 8, 2015 with Maria Kirby, Legal Advisor to Chairman Wheeler, that was attended by Claude Stout, Executive Director, TDI; Andrew S. Phillips, Policy Counsel, National Association of the Deaf ("NAD"); Julie Schafer, Director of Public Policy and Advocacy, Registry of Interpreters for the Deaf, Inc. ("RID") (together, the "representatives"); and the undersigned.

After the meeting, the representatives talked to the other Consumer Groups that jointly submitted the April 7, 2015 *ex parte* letter in support of the March 30, 2015 Joint Proposal of All Six VRS Providers ("Joint Proposal").[1] Some of the Consumer Groups have experienced interpreter shortages in some areas of the country, including California. However, the Consumer Groups believe skills-based routing should not contribute to any interpreter shortage but instead allow interpreter resources to be used more efficiently. Interpreters for skills-based routing would come from the existing general pool of interpreters employed by VRS providers. The Consumer Groups believe skills-based routing will result in a more efficient use of interpreter resources, regardless of how providers decide to use their existing interpreters for a trial of skills-based routing. In particular, the Consumer Groups believe the skills-based routing trial will result in more efficient calls such as shorter call duration and fewer follow-up calls.

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[1] *Structure and Practices of the Video Relay Service Program; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CG Docket Nos. 10-51, 03-123, Joint Proposal of All Six VRS Providers for Improving Functional Equivalence and Stabilizing Rates (filed Mar. 30, 2015) ("Joint Proposal").

The representatives also reviewed after the meeting the recent GAO Report[2] that confirms what Consumer Groups advocated in the TRS Policy statement years ago. As stated in the GAO Report, the FCC needs to establish performance goals and internal controls to oversee its national TRS Program. Unless and until the FCC acts on this responsibility, further rate cuts threaten to erode deaf, hard of hearing, deaf-blind, and deaf and mobile-disabled consumers' access to telecommunications services.

Consumers have long advocated that the FCC focus attention on improving service quality standards and advancing functional equivalency. For example, the Consumer Groups' March 2012 VRS Reform comment proposed: (1) a national certification requirement for VRS CAs; (2) skills based routing; and (3) allowing VRS users to add preferred CAs to their favorites list.[3] Consumer Groups also have pushed for quality testing of VRS interpreters, including "conducting research and tests to evaluate the quality of TRS service and set up minimum quality standards for each type of relay service, particularly since it is difficult for individuals who are deaf, hard of hearing, deaf-blind, or deaf and mobile-disabled to assess whether a CA accurately interprets both sides of the communication."[4] The Joint Providers have offered consumers what the FCC to date has not been able to accomplish. The representatives support rate stabilization because without clear and established service quality standards, they fear consumers and interpreters are likely to suffer the consequences of further rate cuts.

Respectfully submitted,

/s/ Danielle Burt

Danielle Burt

Counsel for TDI

cc (by e-mail):

Maria Kirby	Steve Larew (ALDA)
Claude Stout	Tom Dowling (DSA)
Andrew S. Phillips	Mark Hill (CPADO)
Julie Schafer	Mark Gassaway (AABD)
Sheri Farina (CCASDHH)	Shelia Conlon-Mentowski (TDI)

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2 The GAO Report is available at http://www.gao.gov/products/GAO-15-409 and is attached.

3 See: http://apps.fcc.gov/ecfs/comment/view?id=6017023923.

4 See: http://apps.fcc.gov/ecfs/comment/view?id=6018259326.

United States Government Accountability Office

Report to the Honorable Jeff Sessions, U.S. Senate

April 2015

TELECOMMUNICATIONS RELAY SERVICE

FCC Should Strengthen Its Management of Program to Assist Persons with Hearing or Speech Disabilities

GAO-15-409

GAO Highlights

Highlights of GAO-15-409, a report to the Honorable Jeff Sessions, U.S. Senate

April 2015

TELECOMMUNICATIONS RELAY SERVICE

FCC Should Strengthen Its Management of Program to Assist Persons with Hearing or Speech Disabilities

Why GAO Did This Study

TRS allows persons with hearing or speech disabilities to place and receive telephone calls, often with the help of a communications assistant who acts as a translator or facilitator between the two parties having the conversation. FCC is the steward of the TRS program and the federal TRS Fund, which reimburses TRS providers.

GAO was asked to examine FCC's management of the TRS program. This report examines, among other things, (1) changes in TRS services and costs since 2002, (2) FCC's TRS performance goals and measures and how they compare with key characteristics of successful performance goals and measures, and (3) the extent to which the design of the program's internal control system identifies and considers program risks. GAO analyzed 2002 through 2014 service and cost data, compared TRS performance goals and measures to key characteristics of successful performance goals and measures, compared the design of the TRS's internal control system with GAO's standards for internal control, and interviewed officials from FCC, the 10 companies providing interstate TRS, and associations representing the deaf and hard of hearing.

What GAO Recommends

GAO recommends that FCC develop specific TRS performance goals and measures, conduct a robust program risk assessment, and improve the communication of TRS's rules and procedures. In commenting on a draft of this report, FCC agreed with the recommendations and discussed actions it plans to take to implement them.

View GAO-15-409. For more information, contact Mark Goldstein at (202) 512-2834 or goldsteinm@gao.gov.

What GAO Found

Since 2002, the overall minutes of use and costs for the Telecommunications Relay Service (TRS) program have grown significantly due to the advent of Internet-based forms of TRS and increased usage by the deaf and hard-of-hearing communities. Program data show that total TRS minutes have grown from about 53 million in "rate year" (July-to-June) 2002–2003 to about 249 million in rate year 2013–2014, an almost five-fold increase. Total TRS costs have grown from about $104 million in the 2002–2003 rate year to about $818 million in the 2013–2014 rate year, an almost eight-fold increase. These increases stem from the popularity of new forms of TRS that use the Internet—such as Video Relay Service (VRS) and Internet Protocol Captioned Telephone Service—and the growth in consumers' use of them, according to FCC, some providers, and one consumer group that GAO interviewed.

The purpose of the TRS program under federal law is to provide persons who are deaf or hard of hearing or have a speech disability with telecommunications services that are "functionally equivalent" to those provided to persons without a hearing or speech disability, but FCC has not established specific performance goals to guide its efforts. FCC has established some performance measures for TRS in the form of minimum performance standards for TRS providers, such as regulations requiring that TRS communications assistants must answer 85 percent of TRS calls (except VRS) within 10 seconds; however, these standards are not linked to higher-level performance goals. By establishing performance measures before establishing performance goals, FCC may be spending time and resources on efforts not well linked to key dimensions of the program. Because of the lack of specific TRS performance goals—and specific performance measures crafted around those goals—it is difficult to determine in an objective, quantifiable way if TRS is making available functionally equivalent telecommunications services, and it is difficult for FCC to manage the program in a proactive, results-oriented manner.

FCC has designed some internal controls for the TRS program, but lacks a comprehensive internal-control system to manage program risks. To address fraud, FCC has designed numerous controls to address compliance risks. For example, FCC eliminated the ability of TRS providers to use subcontractors in 2011 and strengthened TRS's provider-certification rules and user registration rules in 2013. Internal control standards call for the completion of a risk assessment to identify and analyze program risks. FCC's last risk assessment, in 2013, was a one-page document that did not comprehensively identify programmatic risks. A robust risk assessment would help FCC identify risks to providing functionally equivalent services and inform the development of the overall internal-control system. Internal control standards also call for effective external communications to groups that can impact the program, such as TRS's users and providers. FCC's program policies are spread across numerous reports and orders. Six of 10 TRS providers told us they experienced difficulties understanding TRS rules. FCC has sought comment on how best to reorganize its rules to improve clarity, but has not yet adopted any such changes. Doing so could improve FCC's communication of TRS rules and procedures to the deaf community and the companies providing services.

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Abbreviations

ADA	Americans with Disabilities Act of 1990
ASL	American Sign Language
CA	“communications assistant”
CTS	Captioned Telephone Service
FCC	Federal Communications Commission
FMFIA	Federal Managers’ Financial Integrity Act of 1982
GPRAMA	GPRA Modernization Act of 2010
HHI	Herfindahl-Hirschman Index
IP CTS	Internet Protocol Captioned Telephone Service
IP Relay	Internet Protocol Relay
NAD	National Association of the Deaf
NECA	National Exchange Carrier Association
MARS	Multi-state Average Rate Structure
OIG	Office of Inspector General
RLSA	Rolka Loube Saltzer Associates
STS	Speech-to-Speech Relay Service
TRS	Telecommunications Relay Service
TTY	Text Telephone
VRS	Video Relay Service

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U.S. GOVERNMENT ACCOUNTABILITY OFFICE
441 G St. N.W.
Washington, DC 20548

April 29, 2015

The Honorable Jeff Sessions
United States Senate

Dear Senator Sessions:

Persons with hearing or speech disabilities want or need to have telephone conversations with persons who do not have such a disability—for example, a call to their doctor, their child's school, or a close relative. The Telecommunications Relay Service (TRS) allows persons with a hearing or speech disability to place and receive telephone calls with the help of a "communications assistant," (CA) who acts in various ways as an interpreter or facilitator between the two parties having the conversation.[1] Different forms of TRS involve different technologies, including the use of video, the Internet, or special caption telephones. Section 401(a) of the Americans with Disabilities Act of 1990 (ADA)[2] requires the Federal Communications Commission (FCC), the steward of the TRS program and the Interstate Telecommunications Relay Services Fund (TRS Fund),[3] to ensure that TRS is available, to the extent possible and in the most efficient manner, to persons in the United States with hearing or speech disabilities.[4] TRS Fund disbursements were approximately $818 million in the 2013–2014 "rate year,"[5] up from about

[1]TRS is not intended for communication between two people who are deaf, hard of hearing, or speech disabled if both parties to the call are using the same type of relay service. There are circumstances in which calls between two deaf people using two different forms of TRS can be compensated. The different forms of TRS are explained later in this report.

[2]Pub. L. No. 101-336, § 401(a), 104 Stat. 327, 366 (1990), codified as amended at 47 U.S.C. § 225.

[3]The provision of TRS services is paid for by the TRS Fund. The TRS Fund is a revolving fund financed through contributions made by all providers of interstate telecommunications services. Service provider contributions are based on a "contribution factor" that is set on an annual basis by FCC. 47 C.F.R. § 64.604(c)(5)(iii). These mandatory contributions are generally passed on to consumers as part of the cost of their telephone service.

[4]47 U.S.C. § 225(b)(1). States provide and pay for *intrastate* TRS services. States usually recover intrastate TRS costs through a surcharge applied to the telephone bills of all telephone customers within a state.

[5]The TRS rate year runs from July 1 to June 30 of the following year.

$104 million in the 2002–2003 rate year, when according to FCC, Video Relay Service (VRS)—a popular form of TRS—began to be widely offered.[6]

In 2008, the FCC Office of Inspector General (OIG) initiated an investigation into VRS fraud. Several individuals eventually pleaded guilty to committing VRS fraud, and FCC made changes to program rules intended to prevent and detect fraud, waste, or abuse in the program. You requested that we examine FCC's management of the TRS program.[7] This report addresses the following questions:

1. How have the services and costs of the TRS program changed since 2002?
2. What are FCC's performance goals and measures for the TRS program, and how do they compare with key characteristics of successful performance goals and measures?
3. To what extent does the design of the TRS program's internal control system identify and consider program risks?
4. According to program stakeholders, what challenges, if any, exist in ensuring quality services for users and a competitive environment for providers?

For each of our research questions, we reviewed relevant FCC TRS orders and comments filed in FCC proceedings. We also conducted interviews with officials from the FCC; the FCC Office of Inspector General (OIG); Rolka Loube Saltzer Associates (RLSA), the current TRS Fund administrator; the National Exchange Carrier Association (NECA), the previous TRS Fund administrator; each of the 10 companies currently providing TRS; and associations representing the deaf, hard of hearing, and speech-disabled (referred to in this report as consumer groups). We analyzed these interviews to identify major themes that emerged about how and why TRS services have changed over time and what issues exist regarding quality, competition, and management of the program. To determine how the services and costs of the TRS program have changed

[6]VRS is an Internet-based form of TRS that allows persons whose primary language is American Sign Language (ASL) to communicate with a CA in ASL using video conferencing equipment.

[7]At the time of the request, Senator Sessions was the Ranking Member of the Senate Committee on the Budget.

since 2002, we obtained and analyzed FCC program data on costs and minutes of usage from 2002 through 2014 for the six major TRS services. We selected 2002 as the start date for our review because it was the first year that VRS—the service that accounts for the majority of TRS Fund payments—was widely offered. Based on documentation and conversations with FCC about how the data are collected and managed, we determined the cost and usage data were sufficiently reliable for the purposes of presenting program trends. To assess FCC's performance goals and measures, we reviewed FCC documents, including strategic plans and performance plans, and interviewed FCC staff about the program's goals and measures. We compared the goals and measures to key characteristics of successful goals and measures, as developed by GAO in previous work[8] and as contained in the GPRA Modernization Act of 2010 (GPRAMA).[9] To assess how the design of the TRS program's internal control system identifies and considers program risk, we obtained TRS's internal control documentation, including risk assessments, descriptions of control activities, and audit reports. We compared the design of the TRS internal control system with the requirements contained in GAO's *Standards for Internal Control in the Federal Government*.[10] To obtain quantifiable information about issues related to TRS quality and competition, we conducted a survey of all 10 current TRS providers. We obtained a 100-percent response rate to our survey. In addition, we conducted a market concentration analysis of the six main forms of TRS by analyzing the number of providers for each service from 2008 through 2014.[11] We also analyzed other measures of market concentration for the two largest forms of TRS (VRS and Internet Protocol Captioned Telephone Service) in terms of current compensation received by providers for the most recent rate years. Appendix I provides additional

[8]GAO developed a set of key practices based on analyses of leading results-oriented organizations, management studies of 23 large federal departments and agencies, and a body of literature on management reform, strategic planning, and performance measurement. See GAO, *Executive Guide: Effectively Implementing the Government Performance and Results Act*, GAO/GGD-96-118 (Washington, D.C.: June 1996).

[9]Pub. L. No. 111-352, 124 Stat. 3866 (2011).

[10]GAO, *Standards for Internal Control in the Federal Government*, GAO/AIMD-00.21.3.1 (Washington, D.C.: November 1999). The scope of our audit did not include the testing of specific internal control activities.

[11]We selected 2008 as the starting year for this analysis because, according to FCC officials, this was the first year with complete market concentration data on all 6 forms of TRS.

information about our objectives, scope, and methodology, including a list of the organizations we interviewed.

We conducted this performance audit from April 2014 to April 2015, in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

FCC manages and oversees the federal TRS program. FCC develops program rules and policies, sets annual rates for compensating providers, and oversees compliance with program rules. FCC contracts out the daily administration of the TRS Fund to a third-party administrator. NECA was the fund administrator from 1993 through June 2011; RLSA has been the administrator since July 2011. The administrator calculates proposed TRS compensation rates and contribution factors, collects fees, and handles the disbursements from the TRS Fund to TRS providers.

According to FCC officials, prior to the ADA, there was no federal requirement for telephone providers to offer a means for people who were deaf, hard of hearing, or speech disabled to access the nation's telephone services, although many states provided a form of TRS at that time. The ADA created the first requirement for a federal program, and the TRS program was established in 1993 in response. The ADA requires that persons with hearing or speech disabilities be provided with telecommunications services that are "functionally equivalent" to the

services provided to persons without hearing or speech disabilities.[12] Until 2000, text-to-voice communication using a text telephone (TTY), a text input device, was the only form of TRS available to users. The advent of Internet-based TRS technologies, however, has increased telecommunications options for people who are deaf and hard of hearing. TRS is available in all 50 states, the District of Columbia, and the U.S. territories for local and long distance calls and some international calls. TRS involves no additional charges for the TRS user.[13] According to FCC officials, FCC has plans to develop a central user-registration database, but currently the number of TRS users is unknown. FCC officials told us that there are roughly 250,000 assigned VRS numbers, but assigned numbers do not equate one-to-one with the number of users.[14] The Centers for Disease Control and Prevention's National Center for Health Statistics reported in February 2014 that there are about 38-million individuals with hearing disabilities in the United States. Although the number of current TRS users is likely much lower than that, according to the National Association of the Deaf, this number could represent the number of potential users.

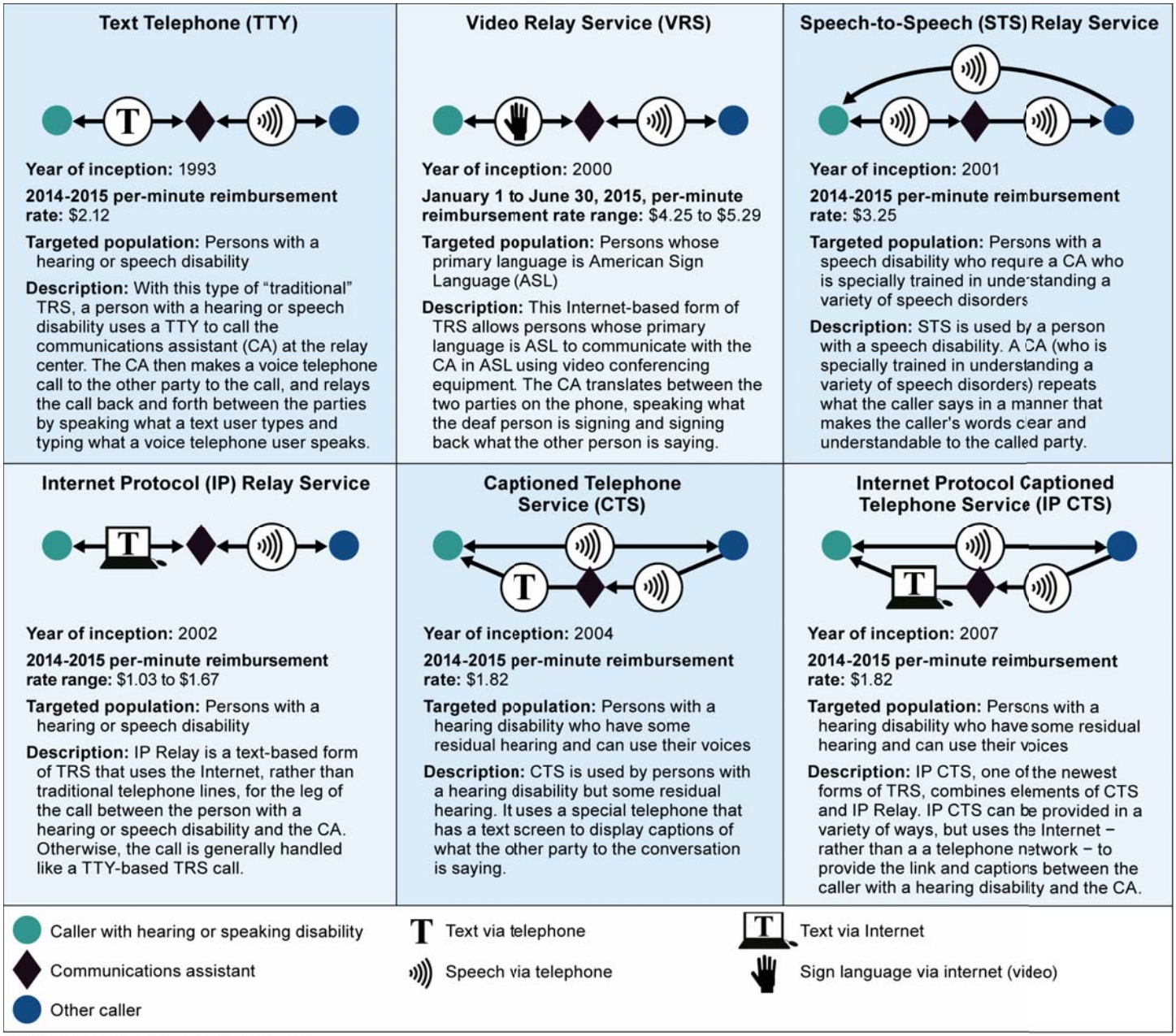
[12]47 U.S.C. § 225. Although TRS can be considered a universal service program in that it seeks to make telecommunications services accessible to all citizens, specifically those with hearing or speech disabilities, the program is distinct from FCC's four universal service programs under the Universal Service Fund. 47 U.S.C. § 254. Those programs are the High Cost program, which seeks to bring affordable telecommunications services to those in rural areas; the Low Income program, which seeks to bring affordable telecommunications services to low income individuals; the E-rate program, which funds telecommunications services to eligible schools and libraries; and the Rural Health Care Fund, which funds telecommunications services for rural health care providers. The construct of the four universal service programs are similar to TRS in that they are managed by FCC, but the daily administration of the Universal Service Fund is handled by the Universal Service Administrative Company. For more information on the Universal Service Fund and universal service programs, including a list of related GAO reports, see GAO, *Opportunities to Reduce Potential Duplication in Government Programs, Save Tax Dollars, and Enhance Revenue,* GAO-11-318SP (Washington D.C.: Mar. 1, 2011), 194–197.

[13]According to the National Association of the Deaf, users generally pay for equipment, such as telephones and computers, and service, such as Internet and telephone, although some providers have given away telephones to encourage the deaf and hard of hearing to use their TRS service.

[14]FCC stated that some of these VRS numbers are assigned to devices with multiple users (e.g., a household with more than one deaf individual) and some users have more than one number (e.g., one number at home and another at work).

There are currently six main forms of TRS: Video Relay Service (VRS), Text Telephone (TTY), Captioned Telephone Service (CTS), Internet Protocol Captioned Telephone Service (IP CTS), Internet Protocol Relay (IP Relay), and Speech-to-Speech Relay Service (STS) (see fig. 1).

Figure 1: Description of the Six Forms of Telecommunications Relay Service (TRS) (as of January 1, 2015)



Source: GAO analysis of FCC data. | GAO-15-409

Note: In December 2014, FCC's Consumer and Governmental Affairs Bureau adopted a mid-year adjustment of the IP Relay rate for the sole provider remaining in this market. The rate is currently set at $1.37 for the first 300,000 minutes through June 30, 2015, and $1.67 for minutes over 300,000 until May 31, 2015. This adjustment was made because the remaining provider asserted that it would

be unable to remain in this business without such rate increases and FCC was concerned that ending this service would harm consumers.

TRS providers include both traditional telecommunications companies, such as AT&T or Sprint, and companies primarily focused on providing TRS service, such as Convo or the Communication Axess Ability Group. Companies are compensated from state TRS funds for the costs of providing intrastate TRS and from the federal TRS Fund for the costs of providing interstate and Internet-based TRS. There are currently 10 TRS providers that are compensated from the federal TRS Fund. No single company offers all six forms of TRS. For example, in October 2014, six companies provided VRS, while three provided TTY and CTS. For all forms of Internet-based TRS, providers must be certified by FCC before they can offer service.

TRS companies provide TRS services and are then reimbursed on a per-minute basis out of the TRS Fund.[15] The TRS reimbursement rate varies by service and is typically set by FCC annually based on reported provider costs, which include an 11.25-percent return on capital investment. For example, as shown in figure 1, the 2014–2015 reimbursement rates ranged from $1.03 per minute to $5.29 per minute for the different forms of TRS. In the 2013–2014 rate year, approximately $818 million in total reimbursements were paid out of the TRS Fund to the companies that provided TRS services.

The rates for the various forms of TRS are determined in the following ways:[16]

- **Text Telephone, Speech-to-Speech, Captioned Telephone Service, and Internet Protocol Captioned Telephone Service:** FCC uses the Multi-state Average Rate Structure (MARS) methodology to determine compensation. MARS uses an average of competitively bid state rates for intrastate TRS to determine predictable, fair, and reasonable costs of interstate TRS.

[15]Providers submit monthly reports of minutes to the fund administrator for compensation from the fund. The reports are then to be reviewed by the fund administrator to ensure that the minutes were handled in compliance with the Commission's rules and orders before reimbursements are made. 47 C.F.R. § 64.604(c)(7)(E).

[16]We did not evaluate the methodologies behind how FCC established reimbursement rates for each TRS service.

- **Internet Protocol Relay:** FCC employs a price cap regulation to determine the compensation rate for IP Relay.

- **Video Relay Service:** According to FCC, to encourage competition while recognizing efficiencies through economies of scale, FCC compensates VRS providers using a three-tiered rate structure based on the minutes of service provided. For January 1, 2015, through June 30, 2015, VRS rates are:
  - **Tier I rate:** $5.29 per minute for minutes up to 500,000 per month;
  - **Tier II rate:** $4.82 per minute for minutes from 500,000.1 to 1,000,000 per month; and
  - **Tier III rate:** $4.25 per minute for minutes over 1,000,000 per month.

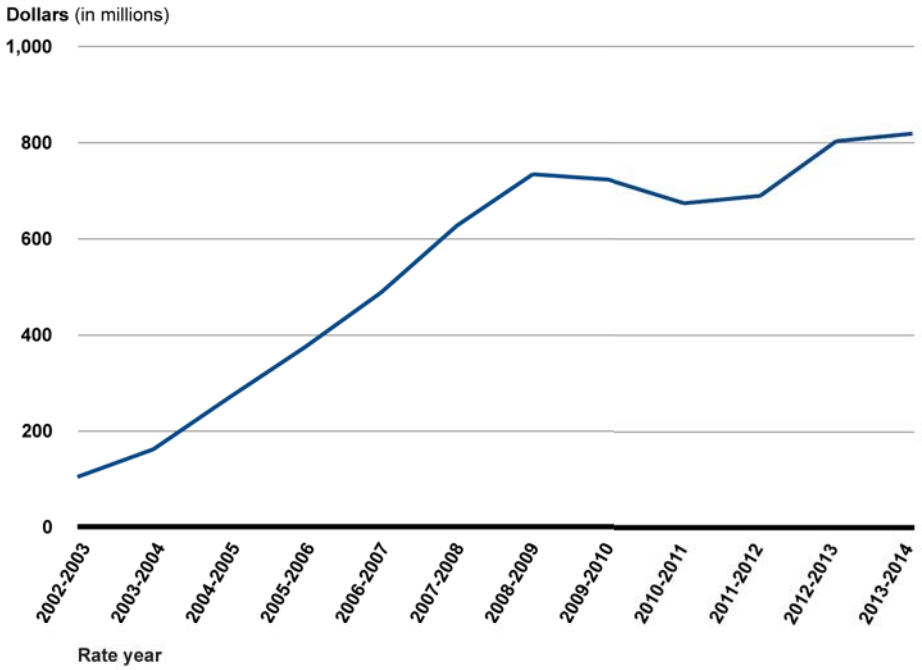
All VRS providers are compensated at the tier I rate for their first 500,000 minutes, but as providers become larger and provide more minutes of service, they are compensated at lower rates for the additional minutes. The three-tier rate structure is intended to reflect cost differences among large and small providers and encourage current entrants to remain in the VRS market, while improving their efficiency over time. FCC intends to eliminate the rate tiers over time. In its 2013 VRS Reform Order, FCC adopted a schedule to phase out the differences between tier I and tier II rates by January 2016 as part of a "glide path" toward an eventual unitary cost-based rate for VRS.[17] According to FCC, it is seeking to replace the cost-of-service ratemaking approach for VRS with more market-based approaches, to the extent that this approach can be accomplished without adversely affecting the public interest and goals of the ADA. FCC believes that a market-based approach to providing VRS will result in lower costs for the TRS program.

[17]See *In the Matter of Structure and Practices of the Video Relay Service Program,* Report and Order and Further Notice of Proposed Rulemaking, 28 FCC Rcd. 8618 (2013) *vacated in part,* 765 F. 3d 37 (D.C. Cir. 2014). (VRS Reform Order).

Total TRS Minutes and Costs Have Grown Significantly since 2002 due to Internet-Based TRS and Increased Usage

According to officials from FCC, most of the TRS providers, and all of the consumer groups that we interviewed, the development of Internet-based TRS technologies and increased usage of these technologies have led to growth in overall program minutes and costs. TRS program data show that total TRS minutes have grown from about 53 million in rate year 2002–2003 to about 249 million in rate year 2013–2014, an almost five-fold increase. Total TRS costs have grown from about $104 million in 2002 to about $818 million in rate year 2013–2014, an almost eight-fold increase (see fig. 2). According to FCC, some providers, and one consumer group we spoke with, the development of TRS technologies that use the Internet—such as VRS, IP Relay, and IP CTS, along with consumer knowledge about them—has led to wider use of TRS services. Since the federal TRS Fund supports the provision of Internet-based TRS, a rise in federal TRS costs occurred in concert with the development and popularity of the Internet-based services (VRS initially and then IP CTS). According to FCC, some providers, and one consumer group, other technology advancements also have increased TRS usage. For example, CTS and IP CTS involve the use of a telephone that provides people who are hard of hearing with captions of what the other party to the conversation is saying. CTS and IP CTS have opened the TRS market to a new group of users—senior citizens—some of whom can become increasingly unable to follow everything said in a telephone conversation due to hearing loss late in life. Also, two consumer groups noted that consumers can now use mobile phone applications to access most TRS, thus no longer being tied to specialized equipment in the home and likely further increasing total program usage.

Figure 2: Total Telecommunications Relay Service Program Costs, 2002–2003 to 2013–2014



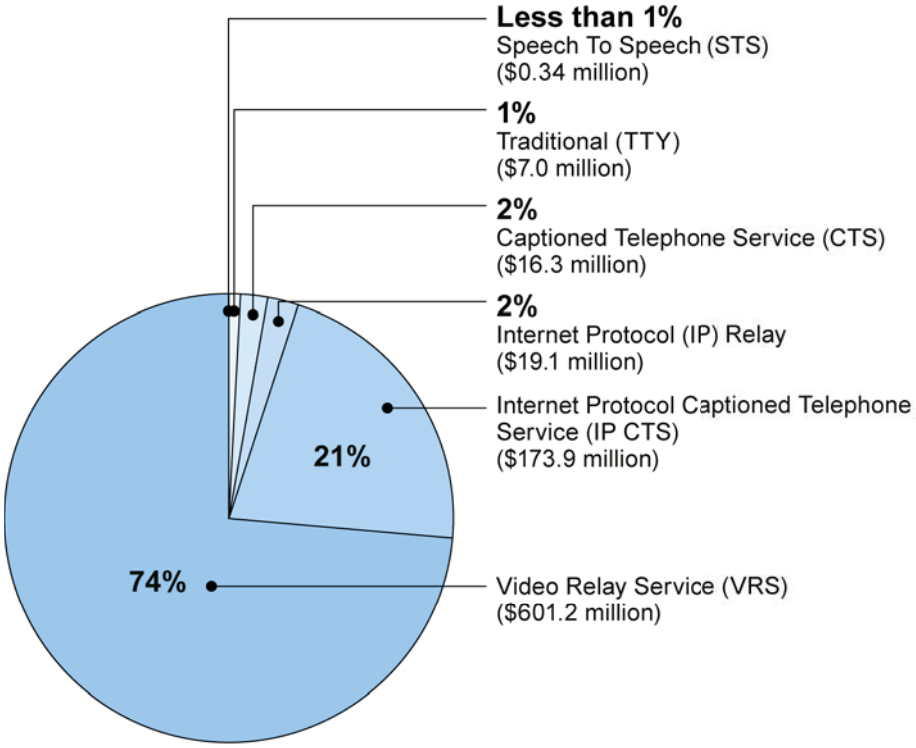
Source: GAO analysis of FCC data. | GAO-15-409

Note: According to FCC officials, cost data from some TRS forms prior to July 2011 either could not be located or were not reliable, so these data are not part of this graphic. However, these omissions do not significantly affect this graphic because they were low amounts at the beginning of the TRS forms' availability.

The largest portion of TRS costs are for VRS, which is used by members of the deaf population who communicate in American Sign Language (ASL). According to the National Association of the Deaf (NAD), the primary reason for VRS's increased use is that it allows users to communicate at roughly 200 words-per-minute instead of the 60 words-per-minute enabled by the typing of traditional TTY. In addition, according to NAD, ASL can be a deaf individual's native language and, when used as part of a telephone conversation, provides a richer communication experience, much closer to that of a hearing individual. VRS requires a specialized CA workforce of ASL interpreters who, according to some of the stakeholders we spoke with, can be in low supply and can command fairly high salaries. These higher CA costs and, according to one provider, the more expensive video link between the deaf individual and the CA have led to VRS costs per minute that are higher than other forms of TRS. VRS costs grew from about $25 million in rate year 2002–2003 to

about $601 million in rate year 2013–2014. VRS reimbursement costs peaked in the 2008–2009 rate year at $621 million, which accounted for about 85 percent of the TRS fund at that time. In rate year 2013–2014, VRS accounted for about 74 percent of the $818 million in TRS reimbursements (see fig. 3). IP CTS is the second most reimbursed TRS service at about 21 percent of total TRS costs.

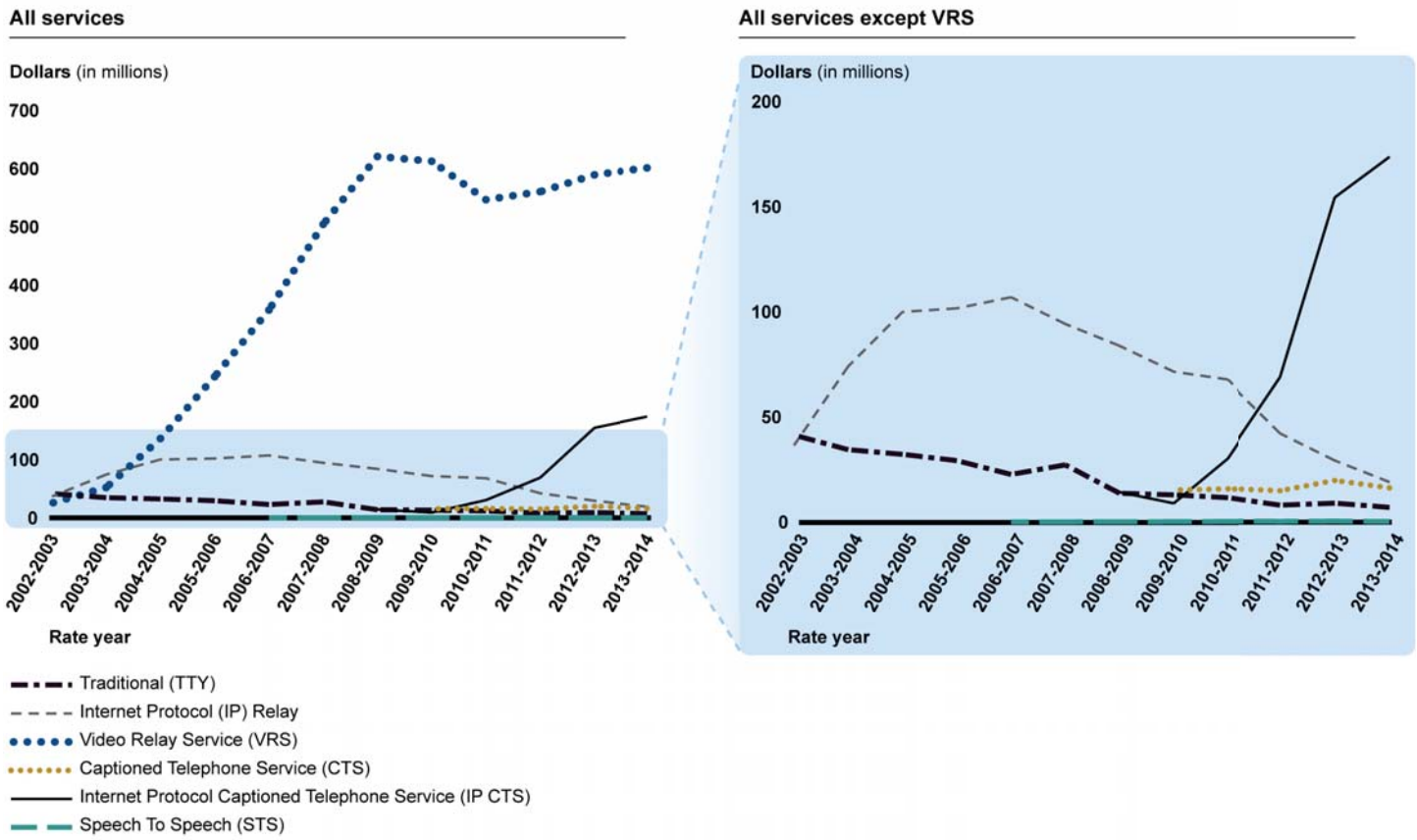
Figure 3: Percentage of Total Costs of Each Form of Telecommunications Relay Service in Rate Year 2013–2014



Source: GAO analysis of FCC data. | GAO-15-409

Although VRS costs are the largest percentage of current program costs, IP CTS costs are growing at the fastest rate. From rate years 2009–2010 through 2013–2014, IP CTS grew from $9 million to $174 million, or about a 19-fold increase (see fig. 4). Some stakeholders we spoke with saw IP CTS as an area where TRS usage is likely to continue increasing as baby boomers age and face increased hearing loss. Today, VRS and IP CTS, both Internet-based technologies, account for about 95 percent of TRS costs.

Figure 4: Total Costs for Each Form of Telecommunications Relay Service, 2002–2003 to 2013–2014



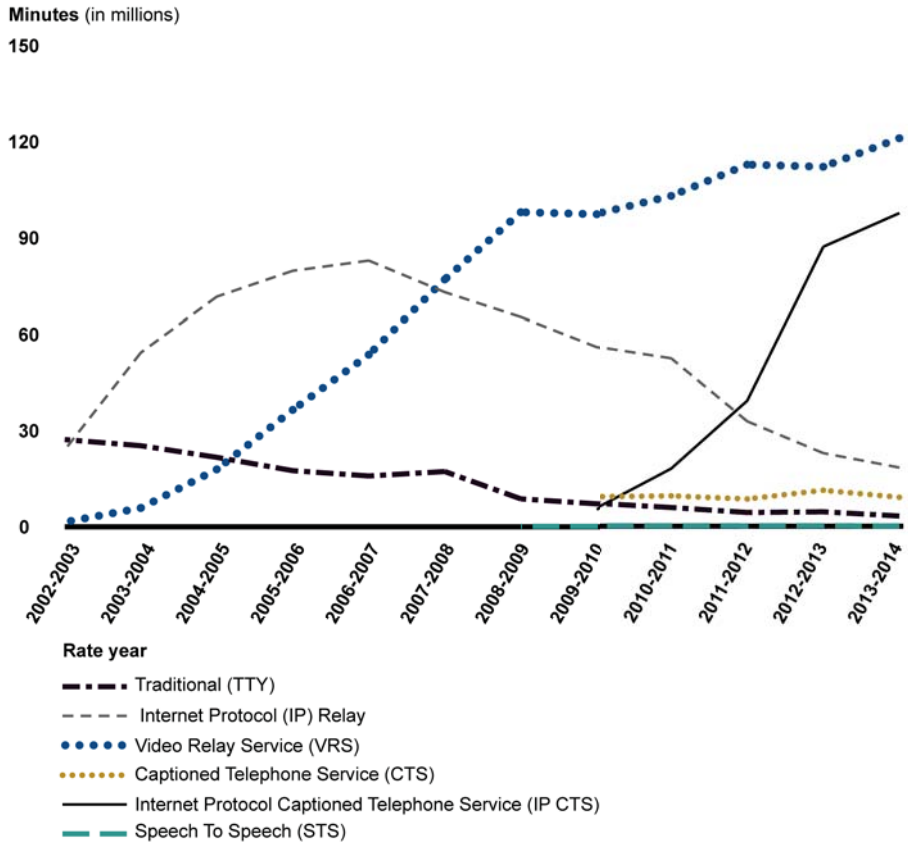
Source: GAO analysis of FCC data. | GAO-15-409

Note: We did not include cost data for CTS and IP CTS prior to July 2009 in this graphic because, according to FCC officials, it either did not exist or was not reliable. In addition, according to FCC officials, prior to July 2006, STS cost data were combined with TTY cost data.

As shown in figures 4 and 5, other forms of TRS are declining or staying the same in terms of costs and usage. IP Relay and traditional TTY, both of which require the person who is deaf or hard of hearing to type his or her part of the conversation, are declining in both minutes of use and costs. IP Relay minutes have decreased from about 83 million in rate year 2006–2007 to about 18 million in rate year 2013–2014. TTY minutes have decreased from about 27 million in rate year 2002–2003 to about 3 million in rate year 2013–2014. Similarly, total program costs for both services have declined as well. Officials from FCC, TRS providers, and consumer groups told us that the growth in popularity of VRS and IP CTS have contributed to a decrease in the popularity of IP Relay and TTY. VRS and

IP CTS allow for much quicker and more natural conversations than the text-based IP Relay and traditional TTY. In recent years, CTS and STS have remained at a steady level in both minutes of use and costs. CTS functions like IP CTS, but uses the traditional telephone network rather than the Internet. STS serves a small, discrete population with severe speech disabilities. As shown in figure 3, both services account for small percentages of the entire cost of the TRS Fund. In rate year 2013–2014, CTS costs accounted for about 2 percent of the fund, while total STS costs were less than 1 percent of the fund. Figure 5 shows changes in minutes of use from rate years 2002–2003 through 2013–2014 for each form of TRS.

Figure 5: Changes in Minutes of Use for Each Form of Telecommunications Relay Service, 2002–2003 to 2013–2014

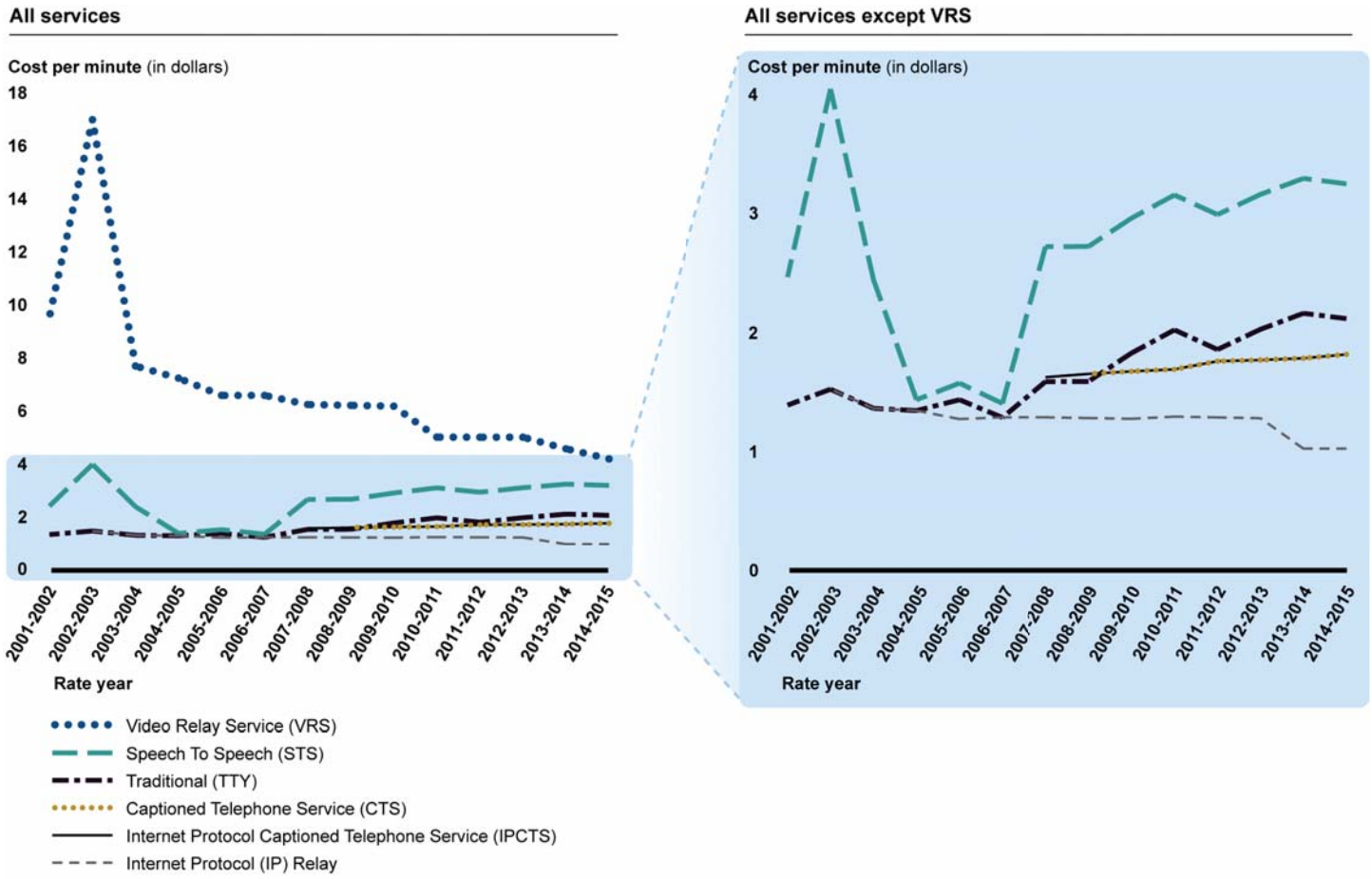


Source: GAO analysis of FCC data. | GAO-15-409

Note: GAO did not include minutes of usage data for CTS and IP CTS prior to July 2009 because, according to FCC officials, data did not exist or were not reliable.

The per-minute reimbursement rates for TRS have varied over time, although the reimbursement rate for VRS has decreased significantly. VRS reimbursement rates decreased from about $17 per minute in 2001–2002 to about $4.25 per minute for VRS Tier 3 in 2015 (see fig. 6). Nonetheless, despite this decrease in the VRS reimbursement rate, its costs have grown significantly over this time period due to increased usage as discussed previously. The reimbursements rates for other forms of TRS, such as CTS, IP CTS, TTY, and STS, have increased moderately since 2011, while rates for IP Relay have decreased.

Figure 6: Trends in Telecommunications Relay Service (TRS) Cost Reimbursement Rates over Time



Source: GAO analysis of FCC data. | GAO-15-409

Note: GAO used reimbursement rates for VRS tier III from rate year 2007-2008 through rate year 2013-2014. Reimbursement rates for IP Relay begin in rate year 2002-2003. Reimbursement rates for CTS and IP CTS begin in rate year 2007-2008.

According to FCC, one provider and one consumer group, reducing fraud also has played a role in reducing costs for some forms of TRS. According to the FCC OIG, as the FCC OIG investigated VRS fraud and VRS reimbursement rates decreased, VRS costs decreased from rate year 2008–2009 to rate year 2010-2011, as shown in figure 4, even as VRS minutes increased in these rate years. In addition, FCC officials have told us that the efforts of the FCC Enforcement Bureau and OIG have contributed to a decrease in IP Relay fraud and thus IP Relay costs. For example, according to FCC officials, FCC's Enforcement Bureau investigated IP Relay providers to determine whether they had implemented a reasonable process to verify the accuracy of users' registration information.[18] Similarly, the FCC OIG worked with the Department of Justice to investigate allegations that a TRS provider had submitted false claims, such as Nigerian scam calls, from foreign locations in provision of an IP Relay.[19] The FCC OIG attributes some of the reductions in IP Relay costs since 2008 to these fraud reduction efforts. In addition to its fraud reduction efforts, FCC made TRS providers' research and development costs and outreach costs no longer reimbursable in FCC's June 2013 VRS Reform Order, which could also reduce costs for some forms of TRS.[20]

[18]The investigations resulted in four actions, the assessment of penalties, and repayments to the TRS Fund. *See, e.g., Purple Communications, Inc, Notice of Apparent Liability for Forfeiture,* 29 FCC Rcd. 5491 (2014).

[19]According to FCC officials, the Nigerian scam calls that took place through IP Relay involved the fraudulent use of stolen credit cards to order large quantities of goods from American merchants via the anonymity of IP Relay.

[20]*In the Matter of Structure and Practices of the Video Relay Service Program*, 28 FCC Rcd. 8618 (2013) (Report and Order and Further Notice of Proposed Rulemaking).

FCC Has Not Established Performance Goals and Related Performance Measures for the TRS Program

We have previously found that results-oriented organizations commonly perform a number of key practices to effectively manage program performance.[21] In particular, results-oriented organizations implement two key practices to lay a strong foundation for successful program management. First, these organizations set performance goals to clearly define desired program outcomes. Second, they develop performance measures that are clearly linked to the performance goals.

With regard to the TRS program, the ADA directs FCC to ensure that telecommunications services are available, to the extent possible and in the most efficient manner, to persons with a hearing or speech disability, and that such services are "functionally equivalent" to the telecommunications services available to individuals without a hearing or speech disability.[22] All of the FCC officials with whom we spoke agreed that the high-level purpose of the TRS program is this provision of functionally equivalent telecommunications to people with hearing or speech disabilities, but FCC has not established specific performance goals to guide its efforts toward achieving that purpose. Officials told us that they believe that the TRS program's rules and numerous related reports and orders have sufficiently identified the performance goals of the program. We identified some performance measures associated with the program, but these measures are not clearly linked to any agency or program performance goals and are sometimes not well defined or measureable. Without stated program goals, it can be challenging for FCC to determine the extent to which it is fulfilling the purpose of the program.

The Government Performance and Results Act requires agencies to develop a performance plan covering each program activity set forth in the budget, which includes developing program goals that are objective, quantifiable, and measurable.[23] TRS is mentioned in FCC's most recent budget request and performance plan, which, for budgetary purposes, groups TRS with FCC's four universal service support programs. However, there are no stated performance goals specific to the TRS program. There have been performance goals for TRS in previous

[21]GAO, *Executive Guide: Effectively Implementing the Government Performance and Results Act.* GAO/GGD-96-118. (Washington, D.C.: June 1996).

[22]47 U.S.C. § 225.

[23]Pub. L. No. 103-62, § 4, 107 Stat. 286 (1993), codified at 31 U.S.C. § 1105(a).

performance plans. For example, in its fiscal year 2012 performance plan, FCC had a goal to increase access to TRS services. However, this goal does not appear in current performance plans, and FCC officials told us they were unable to determine how many unique users participated in the TRS program or the number of potential TRS users. Thus, no performance measure—or method for obtaining the measurement data—was linked to this goal, making it difficult for FCC to demonstrate whether or to what extent access to services among the target populations had increased.

One useful practice for developing successful performance goals that we have identified in previous work is to create a set of goals that address important dimensions of a program's performance and balance competing priorities.[24] For example, officials told us that important dimensions of the program are, among other things, the quality of the services provided to users and the existence of competition among TRS providers. However, FCC has not established performance goals related to these dimensions. For instance, FCC lacks any goal related to interpreter accuracy, which consumer groups we met with stressed was critical to achieving quality services. Accurate relay of important medical, legal, or financial calls by CAs was of particular concern to consumer groups with whom we spoke. Without goals related to important dimensions of service quality, such as interpreter accuracy, it becomes difficult to determine if this attribute of functional equivalency is being met and to identify whether programmatic changes need to be made. FCC officials acknowledged that there is no interpreter accuracy goal, but stated that they believe there is no practical way to evaluate interpreter accuracy. However, the consumer groups and some service providers we met with told us that interpreter accuracy could be evaluated with test scripts. Similarly, with regard to the important program dimension of competition, different numbers of providers offer different forms of TRS, but FCC has no performance goals with relation to levels of competition or ratemaking. For example, FCC stated in its 2013 VRS Reform Further Notice of Proposed Rulemaking that it believes there is a need to replace its VRS cost-of-service ratemaking with more market-based approaches, and proposed transitioning to contract prices set through a competitive-bidding process, where feasible, and auctioning a portion of VRS traffic.[25] However, the proposed rulemaking set forth a

[24]GAO, *Agency Performance Plans: Examples of Practices That Can Improve Usefulness to Decisionmakers.* GAO/GGD-99-69 (Washington, D.C.: February 1999).

[25]VRS Reform Order.

number of questions about how such an approach would work, including questions about bidder qualifications and ensuring the quality of services. Establishing performance goals around competition and ratemaking could help guide FCC's efforts in these areas and improve the transparency of FCC's actions, as decisions could more clearly be linked to the achievement of program goals.

Although FCC lacks specific performance goals, FCC does have in place some specific performance measures for TRS in the form of minimum program standards.[26] Compliance with the minimum standards is necessary for providers to receive compensation from the TRS Fund. These performance measures include, among others, that:

- Providers shall transmit traditional TRS conversations in real time.
- CAs must have a typing speed of at least 60 words per minute.
- Providers must have the following service functionalities: (1) call release, (2) speed dialing, and (3) three-way calling.
- Emergency calls must be able to be expeditiously transferred to an emergency services provider as if a caller had dialed 911 directly.
- TRS calls (except VRS) must be answered by CAs within 10 seconds 85 percent of the time.

In addition, to its credit, FCC has formally established performance measures for the TRS Fund administrator. For example, measures such as the timeliness of TRS Fund collections, payments, and status reports to FCC, among others, are included in FCC's contract with RLSA.

Although FCC has established some TRS performance measures, these measures are not linked to any TRS or universal-service performance goals. By establishing performance measures before establishing performance goals, FCC may be spending its time and resources, and those of the service providers or program administrator, on efforts not well linked to key dimensions of the program. Also, the performance measures FCC is using for the program can be difficult to assess because criteria are lacking. For instance, other minimum standards state, among other things, that CAs must be "sufficiently trained" to meet the needs of individuals with hearing and speech disabilities; must have "competent

[26] 47 C.F.R. §.64.604.

skills" in grammar, spelling, and interpretation of typewritten ASL; and must possess "familiarity" with hearing and speech disability cultures, languages, and etiquette. These terms are not defined by FCC and, as a result, are difficult to measure in a consistent manner across TRS providers. It is up to the service providers to determine that they are meeting these requirements and self-certify that they are doing so.[27]

Thus, although FCC has developed some important performance output measures through its minimum standards for the TRS program, best practices for successful management of a program call for a well-balanced set of outcome and output measures that link to specific program performance goals.[28] Performance measurement is critical to determining a program's progress in meeting its intended outcomes and allowing Congress, FCC, and RLSA to assess the effectiveness of the TRS program and determine if operational changes are needed. Because of the lack of specific TRS performance goals—and specific performance measures that are crafted around those goals—it is difficult to determine in an objective, quantifiable way if TRS is fulfilling its purpose of making available functionally equivalent telecommunications services to persons with hearing and speech disabilities, and it is difficult for FCC to manage the program in a proactive, results-oriented manner.

[27]According to FCC officials, FCC exercises its enforcement authority to review and audit the accuracy of provider certifications, and takes enforcement action against providers that do not comply with FCC minimum standards.

[28]According to the Government Performance and Results Act, "outcome measures" are assessments of the results of a program compared to its intended purpose, and "output measures" are the tabulations, calculations, or recordings of activities or efforts and can be expressed in a quantitative or qualitative manner.

FCC Has Designed Some Internal Controls but Lacks a Comprehensive Internal Control System to Manage Program Risks

An Internal Control System Helps Assure That Program Goals Are Met

Internal control is an integral component of an agency's management process that provides reasonable assurance that the objectives of an agency's program are being achieved. Program objectives can be broadly classified into one or more of the following categories:

- **Operations:** the effectiveness and efficiency of program operations;
- **Reporting:** the reliability of reporting for internal and external use; and
- **Compliance:** program compliance with applicable laws and regulations.

GAO's *Standards for Internal Control in the Federal Government* commonly referred to as the "*Green Book*," defines the standards for internal control in the federal government.[29] The Federal Managers' Financial Integrity Act of 1982 (FMFIA) requires federal executive-branch entities to establish internal control in accordance with these standards.[30] GAO has developed a tool to assist agencies in this process,[31] as has OMB with its *Circular A-123*.[32] The *Green Book* identifies the following five components as being the highest level of the hierarchy of standards for internal control in the federal government:

[29]GAO, *Standards for Internal Control in the Federal Government*, GAO/AIMD-00.21.3.1 (Washington, D.C.: November 1999).

[30]31 U.S.C § 3512.

[31]GAO, *Internal Control Management and Evaluation Tool*, GAO-01-1008G (Washington, D.C.: August 2001).

[32]OMB, *Management's Responsibility for Internal Control*, Circular A-123 (Washington, D.C.: December 2004).

- **Control Environment:** The foundation for an internal control system. The control environment provides the discipline and structure to help an entity achieve its objectives.
- **Risk Assessment:** Assesses the risks facing the entity as it seeks to achieve its objectives. This assessment provides the basis for developing appropriate risk responses.
- **Control Activities:** The actions management establishes through policies and procedures to achieve objectives and respond to risks in the internal control system.
- **Information and Communication:** The quality of information that management uses to support the internal control system. Communicating quality information is vital for an entity to run and control its operations.
- **Monitoring:** Assesses the quality of performance over time and ensures that the findings of audits and other reviews are promptly resolved.

According to the internal control standards, these five components must be effectively operating together in an integrated manner to provide assurance that operations, reporting, and compliance objectives are met. Management is responsible for an effective internal-control system. As part of this responsibility, management sets the entity's objectives, implements controls, and evaluates the internal control system.

FCC Has Designed Some TRS Internal Controls That Address Compliance and Reporting

FCC has designed some internal controls that focus on program compliance and reporting objectives. In response to TRS fraud, first identified by the FCC OIG audits of TRS providers, FCC implemented rule changes. FCC OIG officials told us that they first became suspicious of possible fraudulent activity in the TRS program based on particular reimbursement claims that they judged to be unusual. They told us that at the time there was insufficient scrutiny of call data for irregularities by NECA, the TRS Fund administrator. The FCC OIG began a formal investigation of the TRS program in 2008.[33] As a result of the joint investigation among FCC's OIG, the Department of Justice, the Federal Bureau of Investigation, and the United States Postal Service, 26 people were charged in a scheme to steal more than $50 million from the TRS

[33]The Enforcement Bureau also began analyzing provider call records during this period and identified practices that resulted in inflated call minutes.

Fund.[34] FCC has addressed many of the vulnerabilities identified by the OIG through numerous rulemakings. For example, from 2010 through 2013, FCC, among other things, designed control activities to address specific fraud risks:

- **Prohibited per-minute reimbursement for internal calls:** To address provider practices intended to inflate call minutes, FCC reiterated its policy that calls made by or to employees of VRS providers were not eligible for compensation from the TRS Fund on a per-minute basis.[35]

- **Eliminated subcontracting:** In 2011, FCC changed the certification eligibility requirements for TRS providers to require that all Internet-based providers be directly certified by the FCC. Prior to this order, providers who were certified by FCC or by a state commission were allowed to subcontract some of the provision of services to third parties that did not have to be certified. FCC officials and other stakeholders told us that much of the fraud that had occurred in the VRS program was related to these non-certified subcontractors, specifically in the form of inappropriately generating minutes. Now that all providers are directly certified, fraud in the VRS market has decreased dramatically, according to FCC.[36]

- **Strengthened certification:** In 2011, FCC amended the TRS certification process to require that providers submit evidence demonstrating compliance with FCC's rules and authorizing on-site inspections of providers' facilities.[37] In 2013, FCC further changed provider certification rules to require providers' senior managers to

[34]FCC, *FCC Chief of Staff Praises Decisive Action to Prosecute Fraud in VRS Program,* Press Release (Washington, D.C.: Nov. 19, 2009).

[35]*In the Matter of Structure and Practices of the Video Relay Service Program*, Declaratory Ruling, 25 FCC Rcd. 1868, 1869-70, ¶¶ 3-5 (2010).

[36]The scope of our review did not include testing for fraudulent activity. The FCC OIG continues to conduct audits of TRS providers aimed at uncovering fraud, waste, and abuse in the TRS program. In March 2014, it was announced that investigations by the FCC OIG, the Department of Justice, and the Federal Bureau of Investigation, had led to VRS fraud indictments against two people, bringing the total number of people and business entities indicted for VRS fraud to 31.

[37]*In the Matter of Structure and Practices of the Video Relay Service Program,* Second Report and Order, 26 FCC Rcd. 10898 (2011).

sign under penalty of perjury that their companies' claims for compensation from the fund were valid and that the data they reported were true and accurate.[38] This change was implemented to deter fraudulent activity and further ensure that providers' senior managers were diligent in verifying the information they submitted for reimbursement.

- **Strengthened user registration rules:** In 2012, the Commission implemented a rule that prohibited IP Relay providers from handling non-emergency calls made by first-time users without first verifying the user's registration information.[39] Prior to this rule change, IP relay services entailed some degree of anonymity of end users and provided the technical ability to mask one's calling location. Some individuals exploited this anonymity by using IP relay services to perpetrate scams and other types of abuse. In 2013, FCC also established new VRS registration rules to address the problems of fraud, waste, and abuse by improving the mechanism by which VRS users are verified. The new rule requires VRS users to register with each provider they use and certify that they had a qualifying disability. Users were also given a 10-digit number that was associated with their registered account. According to FCC officials, this change has drastically reduced the number of fraudulent calls placed through the TRS program.

In addition to these controls, FCC has also implemented controls with regard to the TRS Fund's administrator and routine audits of the program. FCC better defined the role of the fund administrator in the contract it entered with RLSA. Among other things, the contract outlined the fund administrator's roles in collecting, disbursing, and protecting TRS funds; in providing routine reports to FCC on the status of the fund; and in analyzing provider data for irregularities and withholding compensation when appropriate. FCC has also implemented an audit program, with audits conducted by the OIG, which includes periodic audits on the fund administrator and audits of service providers to ensure compliance with several TRS program rules. Since 2008, the OIG has conducted one

[38]*In the Matter of Structure and Practices of the Video Relay Service Program*, Report and Order and Further Notice of Proposed Rulemaking, 28 FCC Rcd. 8618 (2013).

[39]*In the Matter of Misuse of Internet Protocol (IP) Relay Service; Telecommunications Relay Services for Individuals with Hearing and Speech Disabilities*, First Report and Order, 27 FCC Rcd 7866, ¶ 13 n.53 (2012).

audit of the fund administrator and 33 audits of providers.[40] OIG officials told us that their audits of TRS have focused on fraud and financial risks to the TRS Fund rather than risks related to the overall management of the TRS program or the quality of the relay services provided to customers.

FCC Lacks a Comprehensive Internal Control System to Manage TRS Program Risks

FCC has designed some internal controls for the TRS program, particularly with respect to program compliance; however, as previously discussed, FCC does not have clear program performance goals. Without performance goals, it is difficult to create a comprehensive internal control system which identifies and manages the risks to achieving the program's goals. It is clear from FCC's agency-wide plans and program-specific orders that combating fraud is a priority, and FCC has designed a number of controls to do so. But the purpose of the TRS program is to provide functionally equivalent telecommunications to persons with hearing or speech disabilities. Thus, it is important that FCC's internal control system be designed around identifying and addressing risks to providing functionally equivalent service, of which fraudulent activity would be one risk. We compared FCC's control system with *Green Book* standards and found several instances where practices were not aligned. These instances, among others, create risks that program's resources are not being effectively used to achieve the program's purpose.

- **Risk Assessment:** Internal control standards call for a risk assessment that will identify risks, both internal and external, and analyze the risks for possible effects. Risk assessments are then used to help management formulate an approach for risk management. According to documents provided by FCC, the last risk assessment of the TRS program was conducted in 2013. FCC's risk assessment of the TRS program was a one-page document that did not comprehensively identify risks or considerations of all interactions between FCC and external parties. We found that the risk assessment focused on fraud, waste, and abuse and did not look at other risks to achieving the provision of functionally equivalent telecommunications to persons who are deaf, hard of hearing, or have speech disabilities. Six total risks were identified, none of which was specific to TRS. For example, one of the six risks identified in the TRS risk assessment was the "failure by management to recognize fraud in FCC programs."

[40]According to the OIG, 28 of these audits are complete and five are in process.

While it is important that fraud risks and risks to program resources are identified and addressed to keep the program efficient and viable, the *Green Book* and other internal control guidance state that a risk assessment should identify all relevant risks posed to achieving program goals.[41] Without a robust risk assessment of the TRS program, FCC may not be able to identify and address the relevant risks to ensuring the provision of functionally equivalent telecommunications to people with hearing and speech disabilities.

- **Information and communication:** Internal control standards call for effective external communications to those groups that can have an impact on programs; such groups in the case of TRS, would include TRS users and service providers. TRS rules are contained in federal regulations,[42] and FCC program policies are explained across numerous reports and orders. Six of 10 providers told us about challenges understanding the program's rules that applied to them in part because rules for a specific type of TRS service are discussed throughout FCC orders rather than compiled in one place for each type of TRS service. As an example, we found changes affecting IP Relay services incorporated into the 2013 VRS Reform Order. Specifically, among other things, the order modifies the rules so that all Internet-based providers are required to obtain individual user consent before a default provider change may occur. Thus, a provider of IP CTS, for example, might not know that rules for its service were part of a VRS order and could be unaware of changes affecting its company. Further, this issue was highlighted in a 2008 OIG audit of the program when the OIG recommended that FCC develop a TRS handbook for providers to supplement FCC rules and consolidate TRS program and administrative policies into a single reference guide. FCC officials told us that such a TRS handbook has not been created because they have prioritized other activities in managing the TRS program. In 2011, FCC, in observing that TRS rules had become "somewhat unwieldy" since 2000, sought comment on whether to reorganize section 64.604 of its rules, which pertains to the TRS program.[43] FCC did not act on that proposal, but in 2013 proposed

[41]According to internal control standards, a precondition to risk assessment is the establishment of clear, consistent agency goals and objectives. As discussed, FCC has not yet established clear performance goals for the TRS program.

[42]47 C.F.R. Part 64, Subpart F.

[43]47 C.F.R. § 64.604.

instead to revise the structure of its rules so that they are service specific and transmission specific, where appropriate, and sought comments more broadly on how best to reorganize its rules to improve program clarity. To date, FCC has not improved its external communications to program users or providers through better organization of TRS rules and regulations nor provided any specific time frames for doing so.

- **Monitoring.** Monitoring can include, for a program like TRS that serves the public, the analysis of consumer complaints. Such complaints may indicate that deficiencies exist—deficiencies that could be investigated to determine any possible underlying causes. FCC aggregates the TRS consumer complaints filed with FCC, state regulators, and providers, as well as aggregating complaints by service, complaint type, and the amount of time it takes to resolve them. For example, 76 percent of the 272 TRS complaints were about VRS. The types of TRS complaints most frequently received included complaints about customer service, interoperability of a consumer's equipment with a service provider's network, and "slamming" and "porting."[44] Subsequent to our request for any analyses FCC may have conducted on TRS complaints, FCC began conducting an analysis in August 2014 on complaints received from July 1, 2013, through June 30, 2014.[45] According to FCC, there had not been any analysis like this conducted before. As a result of not routinely analyzing consumer complaints about TRS, FCC was missing an opportunity to monitor the TRS program and to proactively identify recurring issues, trends, and potential risks to the program and determine if corrective actions were needed. We have previously examined and noted concerns with FCC's complaint process and recommended that FCC expand its outreach to consumers about this process and establish policies and procedures for monitoring and analyzing trends in consumer complaints, among other things.[46] FCC

[44]In general, "slamming" occurs when a VRS provider changes a consumer's preferred VRS provider without the customer's permission. "Porting" involves changing the preferred VRS provider at the request of the consumer. Porting problems may arise if the exiting service provider is not cooperative in releasing the consumer's telephone number to the consumer's new relay service provider.

[45]FCC's analysis is available at https://apps.fcc.gov/edocs_public/attachmatch/DOC-331113A1.docx.

[46]See GAO, *Telecommunications: FCC Needs to Improve Oversight of Wireless Phone Service*, GAO-10-34 (Washington, D.C.: Nov. 10, 2009).

agreed with our prior recommendation and, with regard to TRS, officials told us that they plan to routinely analyze TRS complaints going forward. In January 2015, FCC launched a new online consumer help center, which, according to FCC, will make it easier for consumers to file complaints and help streamline FCC's process for synthesizing and analyzing trends in consumer complaints. Such analyses could help provide FCC with useful TRS data to help it make performance-based decisions and evaluate its efforts with regard to management of the TRS program.

Stakeholders Cited Several Challenges to TRS Service Quality and Competition

Stakeholders Identified Challenges to Providing High Quality Services

Consumer groups and TRS providers identified, through interviews and a survey, the following challenges to TRS service's quality: the lack of skill-based routing, interpreter accuracy, and decreasing TRS reimbursement rates.

Skill-Based Routing

Some of the consumer groups told us that the lack of skill-based routing—which would allow users making a TRS call to request a CA with a particular specialty, such as a medical or legal expertise—negatively affects TRS service quality. For example, one consumer group representative told us that under the current program a TRS user's assignment is based on interpreter availability. The expectation that interpreters will be the best fit for all calls is not reasonable and can lead to poor communication, especially during medical or legal calls. In addition, 7 of the 10 providers responding to our survey said that the lack of skill-based routing leads to lower quality service (see app. II for our survey results). Some consumer groups have requested that VRS providers be allowed, or required, to offer skill-based routing. FCC is not in favor of compensating VRS providers for skill-based routing services due in part to a number of implementation issues. For example, FCC pointed out in its 2013 VRS Reform Order that skill-based routing implementation issues include how to reconcile a skill-based routing function with the requirement that VRS calls be answered in the order

received, the availability of CAs to meet speed of answer requirements, determining the appropriate skills needed for specialized routing, and determining if skill-based routing should be mandatory or voluntary.[47]

Interpreter Accuracy

Some consumer groups we interviewed identified interpreter accuracy as a TRS service quality challenge. Specifically, according to one consumer group, the wide range of skill levels across CAs creates the greatest challenge to users in obtaining accurate interpretation. They noted that some interpreters do not have the required skill level to ensure accuracy, a circumstance that can lead to misunderstandings between the two participants. FCC officials noted that TRS rules allow users to request a change in the interpreter when the user determines that effective communication is not occurring. FCC requires interpreters to be "qualified" but leaves it to the providers to make that determination.[48] FCC officials told us that some providers employ only certified interpreters to meet this requirement, while other providers use their own testing and evaluation methods to determine which interpreters are qualified.

TRS Reimbursement Rates

According to providers, decreasing the amount that TRS providers are reimbursed for their services can affect a company's ability to hire and retain qualified interpreters. For example, 8 of 10 providers responding to our survey indicated that the current TRS reimbursement rates make it much more difficult to hire and retain qualified interpreters. Decreases in TRS reimbursement rates, according to one provider, have led some providers to find ways to cut costs by hiring less skilled—and therefore less expensive—CAs. However, there appears to be disagreement between VRS providers and FCC about whether VRS reimbursement rates are set at appropriate levels. According to the 2013 VRS Reform Order, in setting TRS Fund compensation rates for VRS for the 2010–11 fund year, FCC found that in the prior 4 years—where the rates had been set based on providers' projected costs—providers had been overcompensated by more than $2.00 per minute as a result of a reliance

[47]VRS Reform Order, ¶ 180.

[48]According to FCC officials, the standard for interpreters to be qualified is that they must be able to interpret expressively and receptively, using specialized vocabulary. FCC officials said that the standard is based on case law derived from the ADA.

on projected costs and inaccurate demand forecasts submitted by providers.[49]

Stakeholders Identified Challenges to Encouraging Competition and Technological Innovation

Consumer groups and TRS providers identified, through interviews and a survey, the following TRS-related competition challenges: TRS rate reductions,[50] the lack of compensation for marketing and outreach and research and development, and the lack of interoperability between VRS providers.

TRS Rate Reductions

The amount of compensation TRS providers receive has decreased over time, specifically, for VRS services.[51] For example, as previously discussed, VRS rates have decreased from 2003 to 2015.[52] Providers noted that the rate reductions have affected competition. Specifically, all 10 providers stated that TRS rate reductions decreased competition, with 6 of those providers stating that TRS rate reductions significantly decreased competition. Both providers and some consumer groups told us that TRS rate reductions have prevented new entrants from coming into the market and subsequently limited the number of providers a user can choose from. Further, providers told us rate reductions and increases in compliance requirements will lead more providers to exit the market. However, FCC stated in its 2013 VRS Reform Order, that there is no evidence proving that per-minute costs have dropped dramatically based on the current TRS-fund administrator's recalculated average of providers' current reported per-minute costs.[53] In addition, according to FCC, there are other reasons outside of rate reductions that could compel

[49]VRS Reform Order, ¶ 183.

[50]TRS rate reductions refer to reductions in the reimbursement rates of VRS and IP Relay.

[51]VRS services make up about 70 percent of the payments to providers of all TRS providers from the TRS Fund, which makes VRS the largest TRS market in terms of compensation.

[52]VRS rates went from $17 per minute for all VRS providers in 2003 to $5.29 per minute for tier i VRS providers, $4.82 per minute for tier II VRS providers, and $4.25 per minute for tier III VRS providers in 2015.

[53]VRS Reform Order, ¶ 191.

a provider to leave the market, such as a provider's inability to compete effectively with other more efficient providers.

We conducted a market concentration analysis and found that competition among TRS providers is decreasing as the number of providers for most TRS services is decreasing. For example, the number of TRS providers has decreased from rate years 2008 through 2014 for all six TRS services except IP CTS. (See app. III for more detailed results of our market concentration analysis.) In addition, the VRS and IP CTS services, which have more providers and may appear to have the most competition, are dominated by a few providers. Our analysis found that in 2013–2014 rate year the top VRS provider controlled most of the VRS market while the top three IP CTS providers controlled over 98 percent of the market, based on total minutes of service provided.[54]

Lack of Compensation for Marketing and Outreach and Research and Development

Most TRS providers noted that the lack of compensation for marketing and outreach and research and development hinders competition. For example, 7 out of 10 providers stated that the lack of compensation to TRS providers for marketing and outreach has significantly decreased their ability to compete. According to one provider, a provider's marketing and outreach efforts cut significantly into a provider's profit margin, and as a result, the lack of marketing and outreach compensation discourages new entrants into the market and inhibits a provider's ability to attract new customers through marketing efforts. According to FCC officials, they no longer reimburse providers' marketing and outreach efforts because they cannot effectively determine whether there is a sufficient amount of potential new customers to warrant such an incentive. In addition, FCC stated in its 2013 VRS Reform Order that the majority of TRS's marketing compensation appear to have been used by providers to promote individual-branded marketing campaigns focused on winning back TRS users from competitors rather than informing the general public about the nature and functions of relay services.[55]

[54]Our market concentration analysis measured the extent to which the activities in the TRS market are controlled by a few providers. We measured TRS provider concentration by calculating the number of providers, the concentration ratios of the top providers, and the Herfindahl-Hirschman Index (HHI), which account for the size-distribution of providers or the relative influence of both small and large providers in the market.

[55]*In the Matter of Structure and Practices of the Video Relay Service Program*, Report and Order and Further Notice of Proposed Rulemaking, 28 FCC Rcd. 8618, ¶31 (2013) (VRS Reform Order).

As mentioned, according to FCC officials, FCC ceased marketing compensation to providers and called for the creation of a national marketing and outreach pilot program that will, according to the 2013 VRS Reform Order, seek to ensure that potential TRS users and the general public are aware of the TRS program and its role in providing functionally equivalent services.[56] The 2013 VRS Reform Order outlined a nationwide TRS marketing and outreach pilot program that is intended to, among other things, establish clear messaging about the purposes, functions, and benefits of IP Relay and VRS; educate consumers who are deaf, hard of hearing, or have speech disabilities about broadband adoption programs available to low-income families; provide materials to local, state, and national governmental agencies on the purposes, functions, and benefits of IP Relay and VRS; and explore opportunities to collaborate with other entities to disseminate information about IP Relay and VRS. The 2013 VRS Reform Order called for the selection of either (1) "outreach coordinators" who will conduct and coordinate IP Relay and VRS outreach nationwide and will be compensated through the TRS Fund or (2) an FCC contract with the TRS Fund administrator to enter into a similar arrangement.[57] According to the 2013 VRS Reform order, the TRS outreach coordinators will not be affiliated with any TRS provider and they will disseminate non-branded information to potential new users and to the general public about IP Relay and VRS, the purposes and benefits of the services, and how to access and use the services.[58]

According to most TRS providers, the elimination of compensation for research and development has also reduced competition and limited innovation. For example, 7 out of 10 providers stated that the lack of compensation from FCC to TRS providers for research and development significantly decreases their ability to compete. Specifically, one provider noted that the lack of compensation for research and development reduces a provider's ability to compete through quality service improvements and innovations, such as new and unique provider-specific features including improved software functionality, enhancing VRS picture quality, or increasing captioning speed and accuracy during IP CTS sessions. However, according to FCC, TRS research and development

[56]VRS Reform Order, ¶ 33.

[57]VRS Reform Order, ¶ 33.

[58]VRS Reform Order, ¶ 34.

compensation is inefficient and duplicative. FCC stated in its 2013 VRS Reform Order that TRS research and development reimbursement would allow for duplicative spending because multiple providers would be able to expend research and development funds on similar or identical enhancements and would not share the results with potential or existing competitors.[59] In addition, the 2013 VRS Reform Order, among other things, directed the FCC Managing Director to enter into an arrangement with the National Science Foundation to conduct research to ensure that TRS is functionally equivalent to voice telephone services and to improve the efficiency and availability of TRS.[60] According to FCC officials, in January 2015, FCC and MITRE entered into a memorandum of understanding to conduct this research. FCC officials told us that the research project establishes a Center of Expertise that is intended to bring together experts, representatives of the community of persons with hearing or speech disabilities, and other stakeholders to prioritize and address the needs of TRS users. According to FCC officials, the Center of Expertise held its inaugural meeting in March 2015.

Lack of Interoperability among VRS Providers

The majority of VRS providers stated that the lack of interoperability among VRS providers can inhibit competition. For example, 5 out of 6 VRS providers stated that the lack of interoperability can lead to significantly less competition. Multiple providers told us, while interoperability of VRS equipment is required by FCC,[61] some services are still not interoperable with other providers' equipment and, as a result, one provider told us that they filed a petition with FCC.

To address interoperability, improve competition, and quality, FCC proposed instituting and transitioning to a VRS Advanced Video Communication Platform (formerly known as Neutral Video

[59]VRS Reform Order, ¶ 21.

[60]VRS Reform Order, ¶ 22.

[61]*In the Matter of Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Declaratory Ruling and Further Notice of Proposed Rulemaking, 21 FCC Rcd. 5442 (2006).

Communication Service Platform).[62] According to the 2013 VRS Reform Order, a neutral video communication service provider will have multiple benefits, specifically: more effective and efficient competition on the basis of service quality, including interpreter quality and the capabilities to handle the varied needs of VRS, and more efficient and effective VRS CA service competition through the elimination of new entrant barriers such as the cost of building and maintaining a video communication service platform.[63] In addition, the 2013 VRS Reform order directed FCC's Managing Director to select a neutral third party to build, operate, and maintain the Advanced Video Communication Platform.[64] In the order, FCC stated that it would contract out the above services and responsibilities to a third party and that party would be compensated through the TRS Fund.[65] However, FCC officials stated that this procurement has been cancelled because prices were too high and the agency determined that it would not be in the federal government's interest to accept any of the proposals submitted. Contrary to FCC's perspective about the benefits of the Advanced Video Communication Platform, a majority of the providers responding to our survey stated that the platform will not improve competition. Specifically, 6 of 10 providers stated that the Advanced Video Communication Platform will reduce competition. One provider told us that the Advanced Video Communication Platform could disincentivize new companies from entering the market because existing TRS requirements, such as 24-hour staffing of interpreters, could still be in effect under the proposed Advanced Video Communication Platform. Therefore, according to the provider, labor costs could prevent new entrants from making profits.

Some consumer groups and providers told us that the Advanced Video Communication Platform could stifle innovation. For example, the

[62]According to FCC's 2013 VRS Reform Order, an Advanced Video Communication Platform allows a registered Internet-based VRS user to use VRS access technology to make and receive VRS and point-to-point calls through a VRS CA service provider. The functions provided by the Advanced Video Communication Service Platform include the provision of a video link, user registration and validation, authentication, authorization, ACD platform functions, routing (including emergency call routing), call setup, mapping, call features (such as call forwarding and video mail), and such other features and functions not provided by the VRS CA service provider. VRS Reform Order ¶ 89.

[63] VRS Reform Order ¶ 90.

[64] VRS Reform Order ¶ 93.

[65] VRS Reform Order ¶ 93.

Advanced Video Communication Platform request for proposal included a number of core features that all participating providers will use and offer to its customers. As a result, according to one provider, VRS providers would have to give up their proprietary technology and ultimately become a provider of interpretation services, rather than competing on unique and provider specific technological features in addition to interpretation. For example, another provider told us that as a result of a transition to an Advanced Video Communication Platform, existing innovative provider-specific features would no longer be available and subsequently replaced by Advanced Video Platform features. Since Advanced Video Platform features will be the same for all providers—as are reimbursement rates—competition will shift from which company has the best features to which company has the best interpreters. FCC is in the beginning stages of developing the Advanced Video Communication Platform, so it is unclear at this point how it will affect VRS service quality and competition.

Conclusions

Since 2002, annual TRS Fund expenditures have grown by over $700 million. A variety of factors contributed to this growth, including the development of Internet-based TRS services, increased TRS usage, and some fraud in VRS and IP Relay. The size of the TRS Fund is likely to continue to rise as more persons with hearing or speech disabilities learn about these services and the hard-of-hearing population increases as the baby boomers age. FCC's fraud reduction efforts contributed to the decreases in total TRS costs that occurred in 2010 and 2011. FCC must continue to be vigilant about fraud, especially as new technologies emerge that could require the development of new internal controls. Beyond fraud reduction efforts, however, it is important that the TRS program be managed in a proactive manner that is in accordance with leading management practices. If, for example, FCC does not develop specific multiyear and intermediate goals that are objective, quantifiable, and measurable and that have performance indicators, targets, and time frames, it becomes difficult to determine whether FCC has met the program's purpose of providing functionally equivalent services. Developing linked, TRS-specific performance goals and measures; conducting a full TRS program risk assessment; and consolidating rules and procedures for each TRS service will help ensure that FCC is managing the program in a proactive, result-oriented manner and, ultimately, that the TRS program is meeting its overall purpose of providing functionally equivalent telecommunications services to persons who are deaf, hard of hearing, or have speech disabilities.

Recommendations for Executive Action

To improve performance management of the Telecommunications Relay Service, we recommend that the Chairman of the Federal Communications Commission take the following three actions.

- Develop specific performance goals and measures for the TRS program. FCC should establish goals that would guide its efforts on major program dimensions—for example, consider goals and performance measures related to, but not limited to, service quality or competition among providers.
- Following the establishment of TRS's performance goals, conduct a robust risk assessment that can help FCC design a comprehensive internal-control system.
- Improve FCC's communication of TRS rules and procedures to the community of individuals who are deaf, hard of hearing, or have speech disabilities and the companies providing TRS services through the creation and dissemination of a handbook, program manual, or other consolidation of TRS rules and procedures.

Agency and Third-Party Comments

We provided a draft of this report to FCC and RLSA for their review and comment. FCC agreed with our recommendations and discussed actions it plans to take to implement the recommendations. A copy of FCC's letter is reprinted in appendix IV. FCC also e-mailed technical comments, which we incorporated as appropriate. RLSA did not have comments on the report.

As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 10 days from the report date. At that time, we will send copies of this report to the appropriate congressional committees, the Chairman of the Federal Communications Commission, the Chief Executive Officer of Rolka Loube Saltzer Associates, and other interested parties. In addition, the report will be available at no charge on GAO's Web site at http://www.gao.gov.

If you have any questions about this report, please contact me at (202) 512-2834 or goldsteinm@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Major contributors to this report are listed in appendix V.

Sincerely yours,

Mark L. Goldstein
Director, Physical Infrastructure Issues

Appendix I: Objectives, Scope, and Methodology

The objectives of this report were to examine (1) how the services and costs of the Telecommunications Relay Service (TRS) program have changed since 2002; (2) the Federal Communication Commission's (FCC) performance goals and measures for the TRS program and how they compare with key characteristics of successful performance goals and measures; (3) the extent to which the design of the TRS program's internal control system identifies and considers program risks; and (4) the challenges, if any, that exist in ensuring quality services for users and a competitive environment for providers. The scope of our audit did not include the testing of specific internal control activities.

To determine how the costs and services of the TRS program have changed since 2002, we reviewed FCC documents, including FCC orders and stakeholder comments in FCC rulemaking proceedings. In addition, we reviewed FCC's OIG, GAO, Congressional Research Service, and consumer group reports on TRS. We also collected and analyzed TRS program data on costs and minutes of usage for all six major forms of TRS from 2002–2014. We assessed the reliability of these data through conversations with FCC and RLSA officials about how the data are gathered and maintained. We determined the data were sufficiently reliable for the purposes of showing trends in program usage and costs. We selected 2002 for the scope of our review as that was the year when Video Relay Service (VRS)—a popular form of TRS—was first made widely available. We interviewed:

Agencies

Federal Communications Commission
Federal Communications Commission-Office of Inspector General

TRS Fund Administrators

National Exchange Carrier Association
Rolka Loube Saltzer Associates

Associations

American Association of the Deaf-Blind
Association of Late Deafened Adults
Cerebral Palsy and Deaf Organization
Hearing Loss Association of America
National Association of the Deaf
Telecommunications for the Deaf, Inc.

Registry of Interpreters for the Deaf

TRS Providers

American Sign Language Services, Inc.
AT&T Inc.
Communication Axess Ability Group
Convo Communications
CSDVRS
Hamilton Relay
InnoCaption, Inc.
Purple Communications, Inc.
Sorenson Communications
Sprint Corporation

We analyzed these interviews to identify how and why TRS services had changed in costs and minutes from 2002-2014.

To identify FCC's performance goals and measures for the TRS program, we reviewed FCC documents, such as strategic plans and performance budgets; reviewed FCC web pages pertaining to the TRS program; and interviewed FCC officials about program goals and measures. To assess program goals and measures, we compared FCC's performance goals and measures to key characteristics of successful performance goals and measures that GAO developed in prior work, as well as to requirements contained in the Government Performance and Results Act of 1993, as amended by the GPRA Modernization Act of 2010.[1]

To understand the extent to which the design of the TRS program's internal control system appropriately identifies and considers program risks, we reviewed FCC documents and rules, and spoke with FCC officials about TRS internal controls. Specifically, FCC, FCC OIG, and the current TRS Fund administrator provided us program-related documentation on risk assessments, control activities, and audits. We identified what controls were in place and then compared the design of the internal control system with the requirements contained in the GAO

[1]Pub. L. No. 103-62, 107 Stat. 285 (1993), as amended by Pub. L. No. 111-352, 124 Stat. 3866 (2010).

Standards for Internal Control in the Federal Government (*the Green Book*).

To assess the challenges to ensuring quality services for users and a competitive environment for providers, we first identified challenges that were identified through our interviews with representatives from all 10 TRS providers, associations representing the community of persons who are deaf or hard of hearing, FCC, FCC OIG, and the current and previous TRS Fund administrators. We also reviewed TRS-related FCC orders, standards set in the Americans with Disabilities Act, and industry literature. In addition, to develop quantifiable information about the providers' views on the challenges to ensuring quality services for users and a competitive environment for providers, we developed a survey instrument for the providers. We pretested the survey with one provider to ensure that questions were clear, unbiased, comprehensive, and that terminology was used correctly. We made changes to the content of the questions in response to the pretest. We surveyed all 10 providers and received a 100-percent response rate. Because we administered the survey to the complete universe of potential respondents, there are no sampling errors. However, the practical difficulties of conducting any survey may introduce errors, commonly referred to as non-sampling errors. For example, difficulties in how a particular question is interpreted, in the sources of information that are available to respondents, or in how the data is entered into a database or analyzed can introduce unwanted variability into the survey results. In addition, to further analyze issues related to TRS competition and market concentration, we calculated certain measures of market concentration in the two largest forms of TRS—IP CTS and VRS—and analyzed the data on TRS minutes of service from each provider from 2008–2014. We selected 2008 as the starting year for this analysis because, according to FCC officials, this was the first year with complete market concentration data on all six forms of TRS.

We conducted this performance audit from April 2014 through April 2015 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusion based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Survey of Telecommunications Relay Service Providers

The questions we asked in our survey of TRS providers are shown below. Our survey was comprised of closed- and open-ended questions. In this appendix, we include all the survey questions and aggregate results of responses to the closed-ended questions; we do not provide information on responses provided to the open-ended questions. For a more detailed discussion of our survey methodology see appendix I.

Contact Information:

Please provide the name and contact information of the person completing this survey in case GAO needs to follow up on the information provided.

Name:

Title:

Company:

Email:

Phone:

Service Quality Questions:

1. How, if at all, have the current TRS compensation rates affected your company's ability to hire and retain qualified interpreters?

Response

Much more difficult to hire and retain	Slightly more difficult to hire and retain	No effect	Slightly easier to hire and retain	Much easier to hire and retain	Don't Know	Total Responses
8	0	2	0	0	0	10

2. Industry wide, how, if at all, has a lack of skill-based routing affected TRS consumers receiving quality service?

Response

Much higher quality service	Slightly higher quality service	No effect	Slightly lower quality service	Much lower quality service	Don't Know	Total Responses
0	0	2	2	5	1	10

3. Industry wide, how, if at all, has interpreter workload affected TRS quality?

Response

Much higher quality	Slightly higher quality	No effect	Slightly lower quality	Much lower quality	Don't Know	Total Responses
0	0	2	4	3	1	10

4. Overall, how effective is the FCC's current oversight and testing of TRS quality?

Response

Extremely effective	Very effective	Somewhat effective	Slightly effective	Not at all effective	Don't Know	Total Responses
0	0	4	6	0	0	10

5. Do you have any recommendations for how the FCC could better oversee and test TRS service quality? If so, please briefly describe below.

6. How much, if at all, will the FCC's proposed Advanced Video Communication Platform (formerly known as Neutral Video Communication Service Platform) improve service quality?

Response

A lot	A little	Not at all	Don't know	Total Responses
0	1	5	4	10

7. Please rank the following TRS quality challenges from the most significant challenge to the least significant challenge. Please place a 1 in front of the most significant challenge, 2 in front of the second, etc.

Response

Question	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5
A. TRS compensation rates affect a company's ability to hire and retain qualified interpreters.	4	6	0	0	0
B. Lack of skill-based routing	0	1	5	3	1
C. Interpreter workload	0	1	4	3	2
D. FCC oversight and testing of service quality	0	2	3	1	4
E. Other [Open-ended]	6	0	0	0	0

Competition Questions:

8. How much, if at all, have TRS rate reductions affected competition in the TRS market?

Response

Significantly increased competition	Increased competition	Neither increased or decreased competition	decreased competition	Significantly decreased competition	Don't Know	Total Responses
0	0	0	4	6	0	10

9. For those services that your company provides or has provided, how much, if at all, do current TRS rates attract new companies to enter the TRS market and provide services? (Please respond "Don't provide" if your company doesn't currently or hasn't previously provided the service).

Response

TRS Service Type	A lot	A little	Not at all	Don't know	Don't Provide	Total
VRS	8	0	0	0	2	10
Text-to-Voice TTY-based TRS	0	1	2	0	7	10
Speech-to-Speech (STS) Relay Service	0	1	3	0	6	10
Captioned Telephone Service	0	1	2	0	7	10
Internet Protocol (IP) Relay Service	0	1	3	0	6	10
IP Captioned Telephone Service	0	2	3	0	5	10

10. How, if at all, has a lack of interoperability among providers affected competition?

Response

Significantly less competition	Moderately less competition	Slightly less competition	No effect	There is no lack of interoperability among providers	Don't Know	Total Responses
5	2	0	3	0	0	10

11. How, if at all, has the lack of compensation from the FCC to TRS providers for research and development affected your company's ability to compete?

Response

Significantly less ability to compete	Moderately less ability to compete	Slightly less ability to compete	No effect	Don't Know	Total Responses
7	1	1	1	0	10

12. How, if at all, has the lack of compensation from the FCC to TRS providers for marketing and outreach affected your company's ability to compete?

Response

Significantly less ability to compete	Moderately less ability to compete	Slightly less ability to compete	No effect	Don't Know	Total Responses
7	1	1	0	1	10

13. How, if at all, will the FCC's proposed Advanced Video Communication Platform (formerly known as Neutral Video Communication Service Platform) affect competition?

Response

Significantly increase competition	Increase competition	Neither increase nor decrease competition	Decrease competition	Significantly decrease competition	Don't know	Total Responses
1	1	0	1	5	2	10

14. Please rank the following challenges to TRS competition from the most significant challenge to the least significant challenge. Please place a 1 in front of the most significant challenge, 2 in front of the second, etc.

Response

Question	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Total
A. TRS rate reductions	8	1	1	0	0	0	10
B. Current TRS rate's ability to attract new TRS providers	1	0	3	1	3	2	10
C. Lack of interoperability among providers	1	2	0	2	4	1	10
D. Lack of compensation for research and development	0	2	4	3	1	0	10
E. Lack of compensation for marketing and outreach	0	2	2	4	1	0	10
F. Other [Open-ended]	1	3	0	0	0	0	4

Appendix III: GAO Analysis of Provider Concentration in TRS Product Markets, 2008–2014 Rate Years

Table 1: Provider Concentration in TRS Product Markets (annually as of July 1)

A. Number of Providers							
TRS Products	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
TTY	7	7	6	5	3	4	3
STS	7	7	6	5	3	4	NA
CTS	4	4	4	4	3	4	3
IP Relay	6	6	7	6	3	3	NA
IP CTS	NA	3	3	5	3	3	4
VRS	10	9	8	9	7	6	6

B. Concentration Ratio of Providers by Rate Year			
TRS Products	**2011–12**	**2012–13**	**2013–14**
IP CTS: Top 2 Providers	66.6%	75.2%	71.7%
IP CTS: Top 3 Providers	99.5%	99.3%	98.6%
VRS: Top 2 Providers	92.9%	91.2%	90.2%
VRS: Top 3 Providers	100%	99.0%	98.7%

C. Herfindahl-Hirschman Index (HHI) by Rate Year			
TRS Products	**2011–12**	**2012–13**	**2013–14**
IP CTS	3509	3554	3403
VRS	6973	6791	6603

Source: GAO Analysis of FCC data. | GAO-15-409

Notes: Under section A, number of providers was calculated in July of each year, which is beginning of the rate year

The concentration ratios and the HHI are computed for providers with complete data for the rate year; the data are not reported for other forms of TRS due to data limitations or confidentiality.

Appendix IV: Comments from the Federal Communications Commission

Federal Communications Commission
Washington, D.C. 20554

April 17, 2015

Mr. Mark Goldstein
Director, Physical Infrastructure Issue
Government Accountability Office
441 G Street, NW
Washington, DC

Dear Mr. Goldstein:

Thank you for the opportunity to review and comment on the U.S. Government Accountability Office's (GAO) draft report entitled, *Telecommunications Relay Service - FCC Needs to Strengthen Its Management of Program That Assists Persons with Hearing or Speech Disabilities.*

GAO's attention to the Telecommunications Relay Services Program (TRS)[1] is invaluable. This is a program designed to implement the directive of Congress to establish functionally equivalent telecommunications services to persons who are deaf, hard-of-hearing, deaf- blind, or have a speech disability.[2]

We appreciate GAO noting the extensive efforts of the Commission to investigate and reduce fraud, waste, and abuse, to implement new rules that strengthen the program, and to improve internal controls.[3] We also appreciate GAO noting the mandatory minimum standards established by FCC rules as a set of performance measures for TRS.[4]

We intend to address each of GAO's recommendations to improve our management of the TRS program, and we have begun to take steps toward that goal. First, GAO recommends that the FCC should "[d]evelop specific performance goals and measures for the TRS program."[5] GAO further states that the FCC should, "establish goals that would guide its efforts on major program dimensions—for example, consider goals and performance measures related to, but not limited to, service quality or competition among providers."[6] Toward that end, the FCC is considering options for action that will allow it to coordinate with all TRS stakeholders in developing clearer, more stringent goals and performance measures for TRS. In addition, the FCC is establishing an ongoing testing program that will assess the quality of the handling of TRS calls, as well as provider compliance with TRS rules.

Second, GAO recommends, "[f]ollowing the establishment of TRS performance goals, [the FCC should] conduct a robust risk assessment that can help FCC design a comprehensive internal control system."[7] FCC staff is currently working with the TRS administrator to establish a more comprehensive

[1] Pub. L. No. 101-336, § 401(a), 104 Stat. 327, 366 (1990), codified as amended at 47 U.S.C. § 225.

[2] *Id.*

[3] *Draft Report* at 17-19.

[4] *Id.* at 15-16 (citing 47 C.F.R. §.64.604).

[5] *Id.* at 29.

[6] *Id.*

[7] *Id.*

risk assessment process for TRS in accordance with the guidance in GAO's *Standards for Internal Control in the Federal Government*, commonly referred to as the "Green Book."[8] After establishing goals and measures for TRS as discussed previously in this response, the Commission will perform a robust risk assessment in accordance with GAO's guidance.

Finally, GAO recommends that the FCC, "[i]mprove its communication of TRS rules and procedures to the community of individuals who are deaf, hard of hearing, or have speech disabilities and the companies providing TRS services through the creation and dissemination of a handbook, program manual, or other consolidation of TRS rules and procedures."[9] While we believe that our TRS rules generally are clear to providers, we agree that more could be done to improve our communication, and as such, plan to draft a service-specific guidance manual designed to tie TRS rules to programmatic goals for each form of TRS. In the interim, we continue to expect providers to maintain compliance with our rules in order to receive reimbursement from the TRS Fund.

Thank you for the opportunity to respond to the recommendations in the draft report. The agency has begun to implement GAO's recommendations and will continue to work to complete corrective action on each recommendation. We look forward to working with GAO in the future.

Sincerely,

Jon Wilkins
Managing Director

[8] GAO, *Standards for Internal Control in the Federal Government*, GAO/AIMD-00.21.3.1 (Washington, D.C.: November 1999) (Green Book).

[9] *Draft Report at 29.*

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Appendix V: GAO Contact and Staff Acknowledgments

GAO Contact

Mark Goldstein, 202-512-2834 or goldsteinm@gao.gov

Staff Acknowledgments

In addition to the contact named above, Faye Morrison (Assistant Director), Daniel Bertoni, Melissa Bodeau, David Bruno, Richard Bulman, Scott Clayton, Elizabeth Curda, David Hooper, Bert Japikse, John Karikari, Kelsey Kennedy, Kristen Kociolek, Hannah Laufe, Kieran McCarthy, Joshua Ormond, Steve Rabinowitz, Oliver Richard, Kelly Rubin, and James Sweetman Jr. made key contributions to this report.

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