



**U.S. Department of Health and Human Services
Health Resources and Services Administration**

REPORT TO CONGRESS

**POISON CONTROL
NETWORK PROGRAM
Fiscal Years 2021 and 2022**

Executive Summary

This report to Congress on the Poison Control Network Program for fiscal years 2021 and 2022 is required by section 1273(h) of the Public Health Service (PHS) Act (42 U.S.C. § 300d-73(h)). The Act provides in part:

“Not later than 2 years after December 20, 2019, and every 2 years thereafter, the Secretary shall submit to the Committee on Health, Education, Labor, and Pensions of the Senate and Committee on Energy and Commerce of the House of Representatives a report concerning the operations of, and trends identified by, the Poison Control Network.”

The Health Resources and Services Administration is the primary entity responsible for implementing the poison control provisions of the PHS Act. The Poison Control Network Program works to ensure universal access 24 hours a day, 7 days a week, 365 days a year, to local poison centers, where specially trained providers, physicians, or toxicology experts provide guidance at no cost to callers across the United States, American Samoa, the Federated States of Micronesia, Guam, Puerto Rico, and the U.S. Virgin Islands. The Health Resources and Services Administration is statutorily authorized to provide grants to support poison control center work, maintain a single national toll-free phone number (the Poison Help Line), and implement a nationwide media campaign (the Poison Help Campaign) to increase awareness of the Poison Help Line and disseminate poisoning prevention messages.

This report includes descriptions of: (1) activities pursuant to PHS Act sections 1271, 1272, and 1273; (2) trends in poison center call volume; (3) trends in poisonings and toxic exposures reported to poison centers; (4) an assessment of the impact of the public awareness campaign, including geographic variation; (5) the barriers preventing the poison centers from achieving the purposes and program goals under PHS Act sections 1271, 1272, and 1273; and (6) the standards of accreditation and the number of and reason for any waivers.

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List of Acronyms

APC	America’s Poison Centers
FCC	Federal Communications Commission
FY	fiscal year
HHS	U.S. Department of Health and Human Services
HRSA	Health Resources and Services Administration
MCHB	Maternal and Child Health Bureau
NPDS	National Poison Data System
PCC	Poison Control Center
PHS Act	Public Health Service Act
PSA	Public Service Announcement
SAMHSA	Substance Abuse and Mental Health Services Administration

I. Legislative Language

This report is being submitted as required by section 1273(h) of the Public Health Service (PHS) Act (42 U.S.C. § 300d-73(h)), which states in part:

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II. Introduction

The purpose of the Poison Control Network Program is to provide high-quality guidance and treatment recommendations for poisonings and toxic exposures; support poisoning prevention activities; collect case surveillance data; and contribute to public health emergency preparedness and response. To achieve these goals, the Health Resources and Services Administration (HRSA) makes grants to poison control centers (PCC) serving all 50 states and U.S. territories; maintains the Poison Help Line; and implements a national media campaign to educate the public on PCCs, the Poison Help Line, and poisoning prevention.

The Poison Control Network Program works in partnership with other federal agencies and national organizations to provide a vitally important public health service. This report includes descriptions of activities pursuant to PHS Act sections 1271, 1272, and 1273; trends in poison center call volume; trends in poisonings and toxic exposures reported to poison centers; an assessment of the impact of the public awareness campaign, including geographic variation; the barriers preventing the poison centers from achieving the purposes and program goals; the standards of accreditation; and the number and reasons for any waivers provided to poison centers.

III. Fiscal Years 2021 and 2022 Poison Control Network Program Activities

The Poison Control Network Program makes awards based on the decennial U.S. Census data. In fiscal year (FY) 2021, HRSA awarded \$21.5 million to the 55 PCCs located in the states, the District of Columbia, Puerto Rico, the Federated States of Micronesia, American Samoa, and Guam; and in FY 2022, HRSA awarded \$22.6 million to the same entities. All awarded PCCs were accredited. This section will describe FYs 2021 and 2022 activities, followed by specific metrics in subsequent sections of this report. In FYs 2021 and 2022, the Poison Control Network Program supported the following activities:

- Provided grants to the 55 PCCs to guide callers experiencing a poisoning emergency; advised emergency personnel and health care providers in their management of complex, life-threatening poisoning cases; supported data collection and entry for a national data

surveillance system; and shared poisoning prevention messages that specifically address their communities' poisoning risk. HRSA has provided, on average, support for 13 percent of each PCC's overall budget;

- Supported the national toll-free Poison Help Line (1-800-222-1222), which provides interpretation services in 161 languages, and offers services for the hearing impaired; and
- Led a national campaign to increase awareness of poisoning risks and the availability of the Poison Help Line.

Over time, PCCs have served a variety of critical public health roles, including providing poison-related guidance for the public and health care providers, providing education to their local community regarding relevant risks, and collecting near real-time data to monitor for public health emergencies.

PCCs have also responded to millions of calls annually related to a range of issues, including providing immediate guidance to manage poisonings and toxic exposures and identifying medications. Typical examples of calls include a child who has swallowed a toxic household product, an adolescent who has ingested an over-the-counter medication with suicidal intent, or an adult who has overdosed on opiates.

PCCs also respond to calls from emergency and hospital medical services providers. These providers often seek expert guidance and consultation from PCCs to manage life threatening poisonings. PCCs may complete follow-up calls with families and providers after these consultations to provide additional guidance, monitor progress, document medical outcomes, and support surveillance activities.

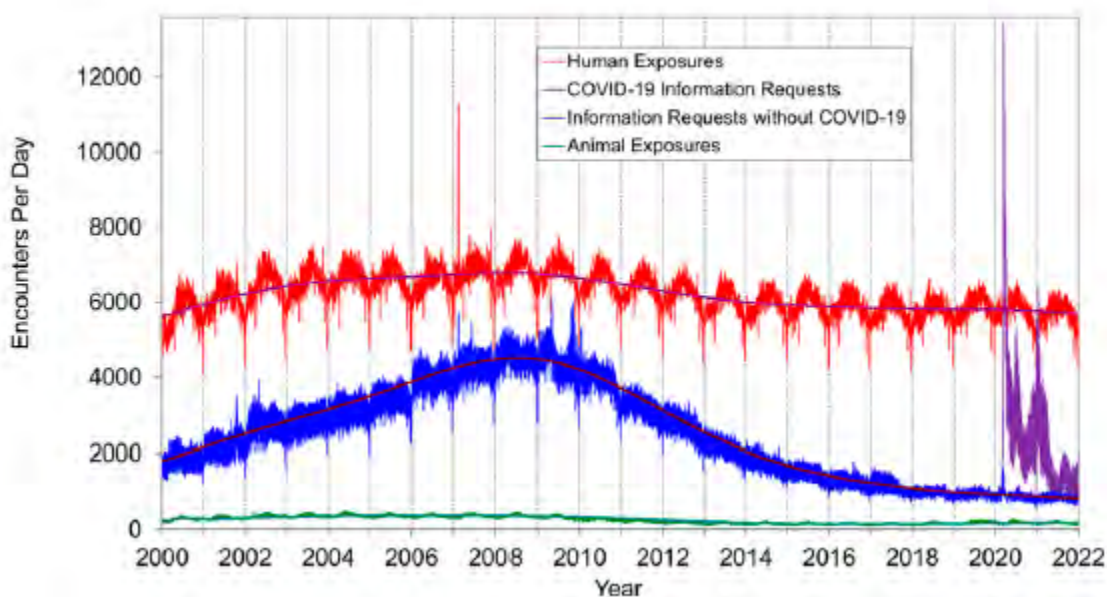
In addition, PCCs have continued to collect and report data to the National Poison Data System (NPDS), which is managed by America's Poison Centers (APC, formerly the American Association of Poison Control Centers). The NPDS is an important resource for emergency preparedness and disaster response. The Centers for Disease Control and Prevention analyzes case-based anomalies (i.e., changes in the types and frequency of calls coming into the data system) to detect and track potential sentinel events related to disasters. This surveillance informs both the local and national public health threat level and response related to poisonings, such as those related to train derailments, bioterrorism agents, and radiation.

Over FYs 2021 and 2022, PCCs have provided around the clock services and partnered with their local public health departments and news and media outlets to address emerging poisoning risks. Additionally, the Poison Control Network Program has expanded its work with federal partners and national organizations to increase awareness of poison risks and prevention strategies; supported the development, dissemination, and access to uniform patient management guidelines and treatment recommendations; and improved data collection systems for emergency preparedness from toxic exposure surveillance.

IV. Trends in Poison Center Call Volume

The most recent data from the NPDS¹ showed that in FY 2021, PCCs managed over 2.8 million calls (2,851,166), of which over 2 million (2,080,917) were related to human poisonings, and over 700,000 (703,086) were for information related to drugs, substance identification, and medical concerns. Medical information requests increased by 32-fold in 2020 (755,103) compared to 2019 (22,505) due to requests related to the COVID-19 pandemic. In FY 2021, increases in drug information requests were 146 percent higher than in FY 2020, due in part to information requests regarding COVID-19 (see Figure 1).² The majority (66.1 percent) of the medical information requests were related to COVID-19 disease, tests, and vaccines. In addition, calls from health care facilities increased in FY 2021 by 7 percent, compared to FY 2020, reflecting an increase in the proportion of calls related to the management of more serious poisonings.

Figure 1. Human Exposure Cases, Information Requests, and Animal Exposure Cases by Day since January 1, 2000³



¹ David D. Gummin, James B. Mowry, Michael C. Beuhler, Daniel A. Spyker, Laura J. Rivers, Ryan Feldman, Kaitlyn Brown, P. T. Pham Nathaniel, Alvin C. Bronstein, & Julie A. Weber. (2022). 2021 Annual Report of the National Poison Data System©(NPDS) from America’s Poison Centers: 39th Annual Report, Clinical Toxicology, 60: 12, 1381-1643, doi: 10.1080/15563650.2022.2132768.

² Ibid.

³ Ibid.

V. Trends in Poisonings and Toxic Exposures

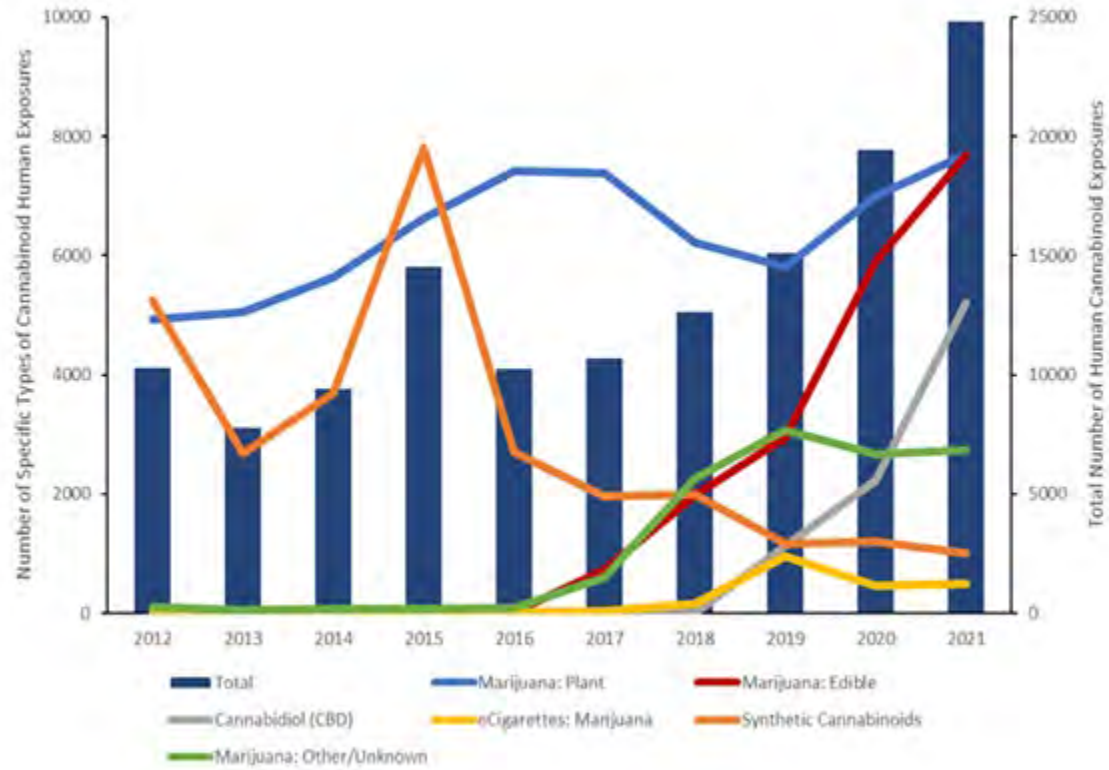
In FY 2021, the most common poisonings reported were similar to previous years and included analgesics such as opiates, acetaminophen, and ibuprofen (11 percent); household cleaning products (8 percent); cosmetics and personal care products (6 percent); antidepressants (6 percent); and sedatives, hypnotics, and antipsychotics (5 percent). For children ages 5 and younger, the most common poisonings were consistent with previous years and included cosmetics and personal care products (11 percent); household cleaning products (11 percent); analgesics such as opiates, acetaminophen, and ibuprofen (8 percent); dietary supplements, herbs, and homeopathic remedies (7 percent); and foreign objects and toys (7 percent). This is similar to what was observed in FY 2020. At the time this report was initially prepared, data from FY 2022 were not yet available from the NPDS.

In FY 2021, PCCs reported that 4,497 poisonings resulted in death. The most common poisonings resulting in death were from analgesics (e.g., non-prescription fentanyl, acetaminophen), stimulants, cardiovascular drugs, antidepressants, and sedatives/hypnotics/antipsychotic medications. Although children younger than 6 years were involved in almost half of calls to poison centers, this age group comprised 1 percent (56) of all fatalities. The most common poisonings resulting in death in these young children were analgesics, fumes/gases/vapors, batteries, stimulants, hydrocarbons, cardiovascular drugs, and dietary supplements/herbals.

Cannabinoid poisonings from edible marijuana continue to trend upwards, showing significant increases in FY 2021 (depicted by the red line in Figure 2).⁴ Cannabinoid poisonings are particularly challenging for children. Of the calls to PCCs for cannabinoid exposure among children less than 13 years old, almost 60 percent received an evaluation in a health care facility, and 21 percent were admitted to an inpatient unit. This reflects significant health care utilization with increasing exposure.

⁴ Ibid.

Figure 2. Human Cannabinoid Exposures from January 1, 2012, through December 31, 2021



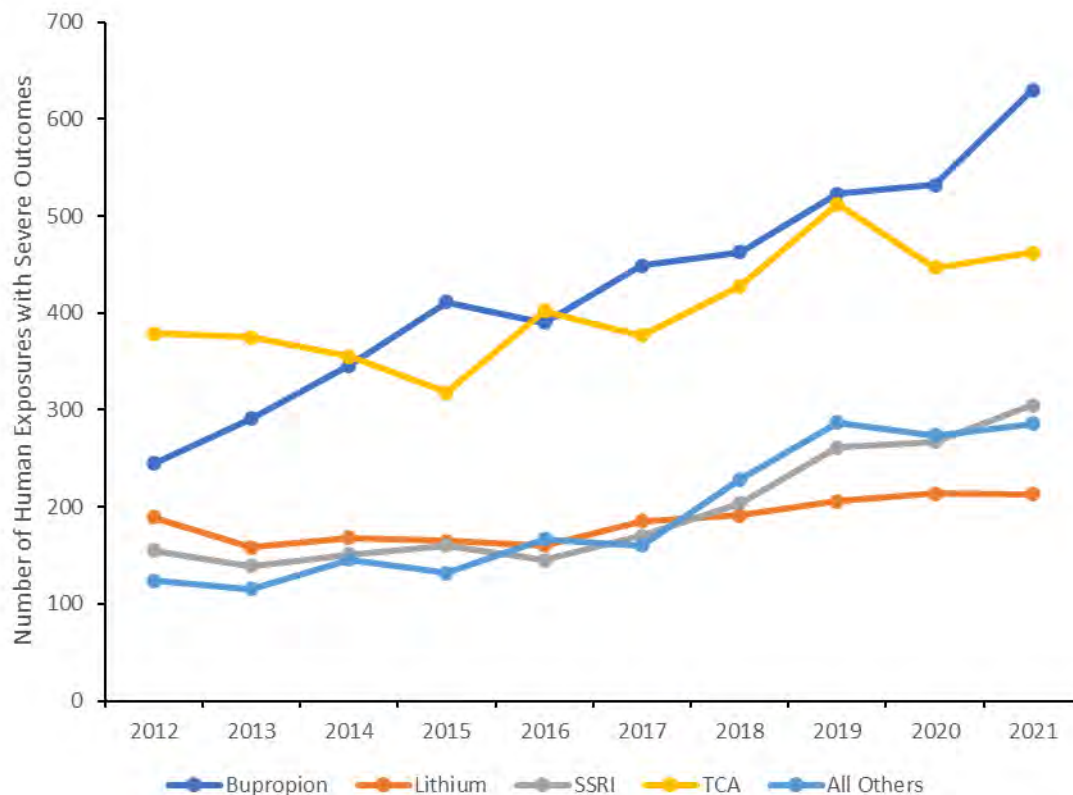
Note: Lines depict the annual number of closed human cannabinoid exposures by type and are plotted on the left vertical axis. Bars depict the total number of human cannabinoid exposures and are plotted on the right vertical axis. The left and right vertical axis scales are different to emphasize the annual changes.

Source: [See footnote 1.](#)

Another trend in FY 2021 was an increase in serious antidepressant poisonings related to bupropion among adolescents and adults. Bupropion is an antidepressant medication that is U.S. Food and Drug Administration-approved for adult depression, seasonal affective disorder, and smoking cessation. This antidepressant has been associated with the most severe poisoning outcomes, which include life threatening effects of the poisoning, resulting disabilities or disfigurement, or death (see Figure 3).⁵

⁵ Ibid.

Figure 3. Severe Outcomes from Single Substance Antidepressant Human Exposures by Year since January 1, 2012



Note: The figure shows the annual number of severe outcomes (Major Outcome or Death) from closed single-substance antidepressant human exposures since January 1, 2012. (SSRI: Selective Serotonin Reuptake Inhibitor; TCA: Tricyclic Antidepressant)

Source: [See footnote 1.](#)

VI. Assessment of the Impact of the Public Awareness Campaign

The Poison Help Campaign seeks to increase awareness among the public and health care providers about the availability of the toll-free Poison Help Line number (1-800-222-1222), PCCs’ services, and poisoning prevention messages. The Poison Control Network Program’s vendor developed and distributed campaign materials and public service announcements (PSA) through traditional (e.g., radio and broadcast television) and social (e.g., Facebook and YouTube) media platforms. The vendor also assessed visit metrics for the Poison Help website.

In FYs 2021 and 2022, the campaign distributed paid PSAs through traditional platforms, including Nielsen-monitored broadcast television networks, national and regional cable networks, and radio stations. These PSAs resulted in over 60 million (60,282,139) gross

impressions (i.e., the sum of audiences, in terms of individuals and/or households viewing or listening to a PSA on multiple occasions), through 8,894 airings in 117 unique markets and 198 stations. The PSAs for radio resulted in nearly 16 million (15,931,745) gross impressions, including 3,050 airings on 53 stations.

The campaign also distributed the PSAs on several social media platforms. The Facebook PSAs received more than 9 million views (9,401,397), and 10,168 viewers clicked or engaged with the PSA to learn more. Both the English and Spanish PSAs performed well, producing similar click through rates and costs per click. Overall, Facebook performance improved in FY 2022 with 800,000 more impressions in FY 2022 than in FY 2021. YouTube PSAs also performed well, with nearly 4 million (3,943,364) impressions, 643,921 video views, and a 19 percent video completion rate.

Overall, the Poison Help Campaign outlets reached a large audience. The estimated value of the combined television and radio impressions was over \$1.5 million, and the cost per click, a measure of cost effectiveness of the PSAs, was more cost effective in FY 2022 than in FY 2021 with a cost per click of \$2.46 compared to \$3.17.⁶

HRSA's Poison Help website, www.PoisonHelp.hrsa.gov, recorded 149,837 views in FY 2021 and 151,663 views in FY 2022. The average time spent on a page in FY 2021 was 1 minute and 49 seconds; in FY 2022, it was 3 minutes and 18 seconds. In FY 2022, users more commonly accessed the website using mobile devices (57 percent in FY 2022 compared to 49 percent in FY 2021). Visits to the [Poison Help English](#) and [Spanish language](#) websites peaked in March during National Poison Prevention Week (observed during the third full week of March each year). These metrics of audience engagement indicate an upward trend.

VII. Barriers Preventing Poison Centers from Achieving Program Goals

PCCs continue to identify the issue of misdirected calls as a significant barrier to achieving their program goals. When initially developed in the early 2000s, HRSA worked to establish and maintain the national toll-free Poison Help Line and developed an algorithm that routes calls by the 3-digit area code (i.e., Number Plan Area). As wireless and Voice over Internet Protocol (VoIP) services became the primary source of calls to PCCs, the number of misdirected calls has increased.

The purpose of routing callers to their local PCCs is to ensure optimal emergency care, management, and public health surveillance for acute poisoning exposures and ingestions. PCCs are staffed with toxicologists and clinicians familiar with the poisonings unique to their locale (e.g., venomous species, trends in illicit substances, and cleaning products) and knowledge about local emergency medical service providers' and hospitals' ability to provide poisoning treatments in their locale (e.g., availability of bariatric oxygen and anti-venom

⁶ Brunet-Garcia Advertising. (2022). *Poison Help Campaign: 2021-2022 Annual Comprehensive Survey*. Internal HRSA data.

supplies, and effectiveness in the field management of illicit substances). This is especially crucial in areas serving rural communities, where the capabilities of each hospital and medical center vary widely. Misdirected calls pose barriers for poison centers to provide optimal guidance, pose significant risks to callers with serious poisonings, and impact real-time surveillance efficacy. Finally, because many PCCs' main sources of funding are tied to their call volume, having local calls misdirected to other PCCs may jeopardize their center's funding level.

The PHS Act, specifically section 1271(b) (42 U.S.C. § 300d-71(b)), requires the U.S. Department of Health and Human Services (HHS) to coordinate with the Federal Communications Commission (FCC), to the extent technically and economically feasible, to ensure that calls made to the Poison Help Line are routed based on the physical location of the caller (i.e., geolocation) rather than by area code of the contact device. To gain a fuller understanding of the root causes of misdirected calls and begin to develop solutions that would address this issue, HRSA has worked closely with the FCC, other HHS partners, and stakeholders to identify the root causes and potential solutions for this problem.

Discussion with the FCC, the Substance Abuse and Mental Health Services Administration's (SAMHSA) 988 Suicide and Crisis Lifeline, and telecommunications providers informed HRSA on potential solutions the group is exploring for improving call routing issues. For example, the SAMHSA and FCC collaboration has prioritized solutions involving geolocation, the physical location of the contact device.

VIII. Standards of Accreditation and Waivers

APC sets the national standard for the accreditation of poison centers. Both the APC and the Mississippi State Department of Health are certified accrediting bodies that the Secretary of HHS has approved as having standards in effect for accreditation that reasonably provide for the protection of the public health with respect to poisoning. As of September 2022, all poison control centers are accredited by APC, except for Mississippi, which has been accredited by the Mississippi state government as is permissible under statute.

The accreditation designations are designed to ensure that all poison centers are providing high-quality services. The body responsible for APC accreditation consists of appointed individuals according to APC bylaws. The APC is responsible for establishing the policies and procedures for accreditation. The Mississippi State Department of Health accreditation standards are very similar to the APC standards. The main difference is in the credentials required of those providing clinical toxicology supervision.

According to the APC Accreditation Policies and Procedures and the Accreditation Purpose and Definitions, the poison center must be a member of the APC and demonstrate the ability to provide electronic linkage, functional linkage, public education, health care provider education, and quality improvement to be eligible for accreditation.⁷ Electronic linkage is defined as real-

⁷ American Association of Poison Control Centers. Accreditation Criteria of Poison Control Centers. Completed

time technology allowing another poison center to access medical records when providing coverage for a call from another poison center's region as well as consultants and staff being able to use remote access. Functional linkage is defined as a cooperative relationship with another poison center to ensure the coordination of services, patient care guidelines, databases, and other reference materials.

Poison centers submit applications for accreditation to the APC every 7 years and provide annual updates in the intervening years. The Accreditation Committee meets 2 weeks after the receipt of a complete application and votes to accredit, re-accredit, place on probation, accredit upon compliance, or deny accreditation. If a poison center is placed on probation or receives an accreditation upon compliance status, the Accreditation Committee will provide the poison center feedback on the deficiencies and a deadline to make corrections. If a poison center is denied accreditation, it will be notified in writing and given opportunities to make changes and reapply. There is an appeals process if the center believes that the decision made by the Accreditation Committee was incorrect.

For purposes of eligibility for Poison Control Network Program grants, the Secretary of HHS under certain circumstances may provide a waiver of the accreditation requirements (and a renewal of the waiver) to a PCC while it completes its accreditation process.⁸

IX. Conclusion

This report summarizes the activities, importance, and impact of the Poison Control Network Program. Poison centers play a critical role in the effective management of poisonings and toxic exposures, as well as in identifying emerging trends and responding to disasters. The public awareness campaign continues to reach the public and health care providers to increase awareness of the services offered by poison centers. HRSA has made important inroads in addressing the pressing issue of misdirected calls and is taking steps toward technologically and economically feasible solutions. HRSA will continue to sustain and expand strategic communications efforts. HRSA will also continue to coordinate its primary messages with key constituents and identify opportunities for cross-promotion with other federal poisoning prevention and related program goals.

revision by PC Accreditation Standards Taskforce (PAST) in 2012. Revision adopted on February 27, 2013. Internal to APC.

⁸ 42. U.S.C. § 300d-73, § 1273 of the PHS Act.